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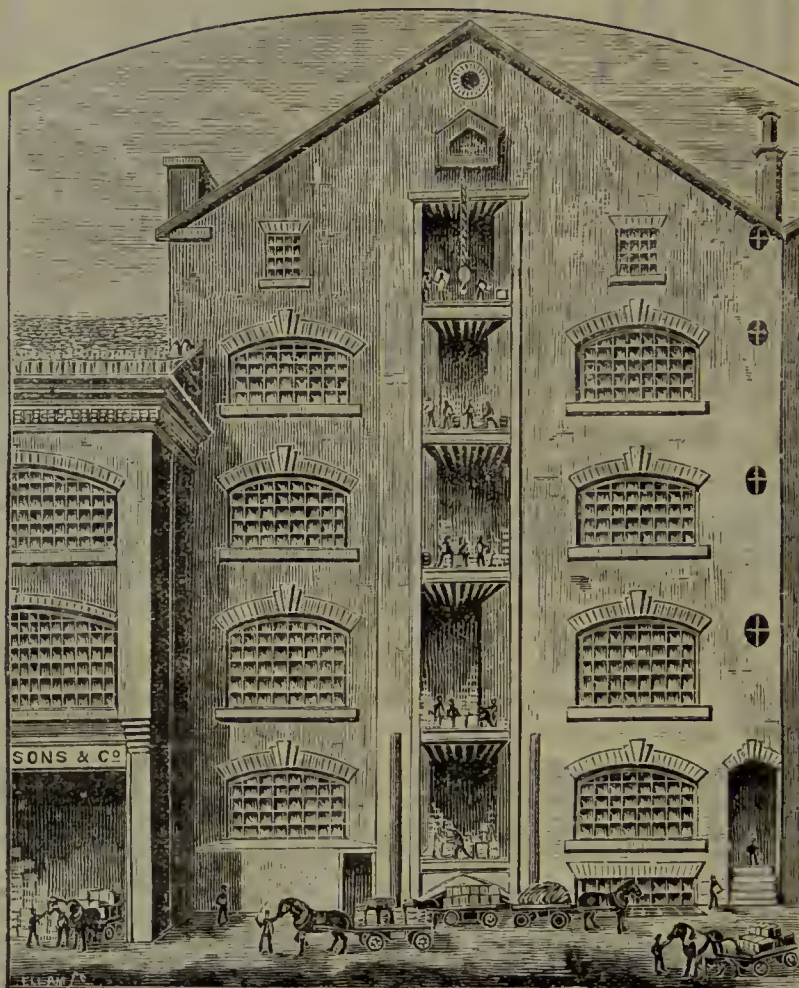
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OUTDOOR, qualified for Dispensing only; City hours; must be well recommended. Apply, with full particulars of experience, references, &c., to N. C. S., care of Bais Bros. & Co., 4 Jewry Street, E.C.

TRAVELLERS wanted for the sale of our celebrated "Salvitalia." Only first-class men with good references need apply, by letter only, to the Salvitalia Manufacturing Company, 6 and 8 Lime Street square.

QUALIFIED Assistant, for Light Retail and Dispensing branch; indoors. State age, height, salary, and usual particulars enclosing photo (to be returned), to Breeze & Co., Chemists, Plymouth or Devonport.

JUNIOR ASSISTANT for Retail Counter; outdoors; must be an active Counterman of good appearance and address. Apply, stating age, height, salary required, and enclose photo, S. Wand, Chemist, Leicester.

AN Assistant to Manage a Branch Light Retail and Dispensing. Apply, stating experience, age, height, and salary required (indoors), with photo, to J. B., Pharmaceutical Chemist, 197 Moseley Road, Birmingham.

WANTED, a steady and experienced Invoice Clerk, for the office of a firm of wholesale Druggists. Address, with testimonials and state salary required, to "Alpha," care of R. Morrison & Co., Drug Brokers, 2 Foa Court, London.

TEMPORARY Assistant for 2 or 3 months, age about 22 for a first-class Dispensing business; must be reliable Dispenser. Apply, stating age, experience, and reference, to Timothy & Stodwith, Pharmaceutical Chemists, A cot.

WANTED, a Junior, accustomed to a good Retail and Dispensing business; one used to a mixed Country trade preferred. Apply, stating age, height, salary required, with photo if possible, and references, to W. M. Turner, St. Ives, Hants.

IMPROVER or Junior; hours 8 to 8. Wednesdays 4. Saturdays 10.30; no Sunday duty; comfortable home; state age, height, references, salary required, photo (if convenient). W. Wilkerson, Victoria Buildings and Church Street, Rushden, Northamptonshire.

AT once, Junior Assistant; £50; passed Preliminary; one evening a week free from 5 p.m.; a term-time evenings free from 8 p.m. till 10.40 p.m.; alternate Sunday duty from 6 p.m. till 8 p.m. W. R. Hues, Dispensing Chemist, Handsworth, Birmingham.

A QUALIFIED Assistant, about 23; must be a good business man, smart and active, with other counter hands under him; salary £50, indoors; Wesleyan preferred; no Sunday duty. Apply, with references, to Messrs. Dixon & Co., Exchange Walk, Nottingham.

A STEADY man required, qualified, for pushing business. R. Lord Gifford, Blackburn.

WANTED, qualified Assistant for a week; state age, terms, and when disengaged. Apply, Mason, Chemist, Parson's Green, South Fulham.

JUNIOR, by August 16, for Light Retail and Dispensing business; permanency; Churchman. State full particulars to A. Cartwright, Chemist, Henley-on-Thames.

GOOD Junior for General Retail trade; time for study; good salary to reliable man; state age, experience, and references. Cattell, 189 Aston Road, Birmingham.

ASSISTANT (outdoors) wanted for 3 or 4 weeks; London district; some knowledge of Homoeopathy required. Address by letter, A. G., care of Mr. Hart, 43 Albert Gate, S.W.

A TRUSTWORTHY Assistant, for the Retail Counter; also an Assistant, for putting up stock; out-doors. Apply, D. P. Roberts, Drug and Chemical Store, 120 North End, Croydon.

REPRESENTATIVE required by a provincial house of good standing. Apply, giving full particulars, to "Vigilans," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TURNOVER or Improver wanted by a Pharmaceutical Chemist, where there is every opportunity of learning his business. Apply, stating age and reference, to Mr. Sandilund, Bicester, Oxfordshire.

WANTED. Assistant to Manage Light Retail and Prescribing business; must have good address, and be able to extract teeth; hours easy; salary 30s. per week. Apply to W. T. Owbridge, The Laboratory, Hull.

HICKS & CO., Cardiff, have a Vacancy for an Assistant; must be a reliable Dispenser and good Counterman; no Sunday duty. State age, height, references, and salary required (out-doors), and enclose carte.

MESSRS. THOS. G. STONHAM & SON, Maidstone, have a vacancy for a qualified Assistant as Dispenser (indoors). Apply by letter, stating age, height, qualification, and experience; send photo, to be returned.

WANTED, young man for Mixed business; must be able to Prescribe and Extract Teeth, also willing to do any work in connection with Oil and Drysaltery. Address, "Chemist," care of Mr. Davis, 155 Waterloo Street, Oldham.

AN Assistant for general Retail and Dispensing business, must be active and obliging; good Counterman; not qualified; send carte and references. "Tenax," c/o Hodgkinson, Prestons & King, 81 Bishopsgate Street Without, London.

ASSISTANT, about 22, accustomed to a good-class Dispensing business; must be thoroughly steady, and of good moral character, an abstainer; state age, height, and salary required, enclosing carte, and references. Address, Mr. Vizer, 154 Marine Parade, Brighton.

ASSISTANT, by September 1; aged 20 to 25; accustomed to Country trade; obliging, trustworthy, and steady, and capable of taking charge in absence of principal. State salary (indoors), and give every particular of previous situations, age, height, references, &c., to C. B. Shaker, Lancaster.

WANTED, an Assistant, with good experience, as Manager for Chemists' widow; one only kept; middle-class Retail and Dispensing; Minor qualification, and able to prescribe preferred. Apply, with full particulars enclosing photo and references, with salary required (indoors), to Mrs. Dolman, Cheltenham.

EARLY in September, a gentlemanly and thoroughly trustworthy assistant, of good address, for good-class Retail and Dispensing; must be a quick and accurate Dispenser, with the Minor qualification. Apply, with carte, stating age, height, and salary required (indoors), to Henry Davis, Chemist, Newbury, Berks.

WANTED, a young Analytical and Pharmaceutical Chemist, possessing a thorough knowledge of Salt and Brewing. Apply by letter, stating explicitly age, experience, salary required, and all particulars, to M. B. & Co., care of Crossley, Moir & Co., Advertising Agents, 57A Coleman Street, E.C.

SPLENDID Opportunity to a young man wishing to commence business; no qualification necessary, as present Proprietor is qualified, and would give half profits and interest in the business; yearly profits not less than £400; capital required, about £250. Apply, for full particulars, "Pharmaceutical," 2 Broad Street, Bristol.

WANTED immediately, an Assistant to manage a branch business; married; used to country and prescribing business; abstainer and Churchman preferred; short hours; house to mid. State salary required, with photo (if convenient, which will be returned), references, and usual particulars, to "Pharmacy," care of W. T. Baker, High Street, St. Mary, Bedford.

IMMEDIATELY, a Senior and a Junior Assistant for good Country business (outdoors); must be thoroughly steady, obliging and trustworthy, and genuine latest taken in the business will be appreciated to the full. Please enclose photos: Senior, not under 24, of good experience; Junior, just out of good apprenticeship preferred; time for study if desired. Wilkinson, Hemel Hempstead, Hertfordshire.

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JUNIOR: 6 years' experience; northern counties preferred. Buckle, Barnard Castle.

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ASSISTANT (21); 4½ years' experience; satisfactory reference. Evans, 59 High Street, Evesham.

ASSISTANT; aged 23; London preferred; time for reading. 20 Endsleigh Place, Plymouth.

IMPROVER; time for study; country preferred; good references. James, 63 Worcester Street, Stourbridge.

LOCUM-TENENS; experienced; abstainer. "Veritas," 10 Bond Street, Higher Broughton, Manchester.

ASSISTANT (outdoors); aged 22; Major; near Manchester. Woodruff, Westleigh, Cheadle Heath, Stockport.

TRAVELLER for good house; town or country. "Major," 157/23, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LOCUM TENENS; qualified, experienced, trustworthy; tall; teetotaler. Hall Roberts, Holstein House, Folkestone.

M. R. SEYMOUR, 37 Milk Street, Bristol, will be open to receive a re-engagement as Locum-Tenens, after August 18.

AS Manager; Light Retail; South of England. "Pharmacist," 157/23, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANAGER; Senior or Dispenser; aged 50; qualified; active; sober; good reference. L. D., care of Mr. Moore, 1 Fetter Lane, London.

AS Junior, in good Dispensing business; London; time for study; indoors preferred. Bell, Brownrigg, Bardon Mill, Northumberland.

LONDON or Birmingham—Part time Assistant; abstainer; aged 22; indoors or outdoors. "Antipyrin," 63 Lee Bank Road, Birmingham.

LOCUM-TENENS; experienced; disengaged August 18; aged 26. "Locum," care of Mr. Gale, Chemist, Dalston Junction, London, N.E.

BY qualified Chemist, temporary employment (watering place not objected to); references undeniable. G. Marshall, Spilshy, Lincolnshire.

JUNIOR (23); knowledge of Vulcanite Dentistry; can extract teeth; used to Mixed business. "Junior," 77 Great Duke Street, Manchester.

SITUATION, with time for attending lectures, near Wells's, 7 years' experience; good references. Geo. Bray, Wiggaton, North Petherwin, Llanecston.

T. P. wants engagement for 3 months or season in a good-class business; passed Minor; aged 22. Care of Mr. Clarkson, Chemist, West Hartlepool.

PERMANENT Branch Manager, or temporary until suited; qualified; married; thoroughly reliable. "Fidellis," Balss Bros., 4 Jewry Street, Aldgate, E.C.

AS Improver in a good Dispensing business, with time for study; in London or large town where classes are held. Apply, N., care of Wileys & Co., Coventry.

TO Wholesale Manufacturing Chemists. As Wet Counterman or position of trust in a good house; over 8 years' Wholesale, besides Retail experience; highest references. "Fortywaif," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT or Manager, with a view to purchase, or Partnership in twelve months; outdoors only; amount of cash and full particulars at personal interview; store trade not objected to. J. J., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATION wanted on the Continent about beginning of October; Minor qualification; held situations in English watering places; knowledge of French; aged 23; best references. Apply, "Alpha," Heaton, Squire & Francis, Southwark Street, London.

AS good Junior; disengaged 23rd inst.; good scientific as well as commercial experience in both Wholesale and Retail; capable of taking charge in absence of principal; unqualified; aged 23; height 5 feet; highest references. "Assistant," Y.M.C.A., Needleless Alley, Birmingham.

AS Junior; aged 20; London; outdoors; good references. Ifill, 7 Jelf Road, Brixton.

TEMPORARY Dispenser; Minor student; good experience. "Flora," 18 Montford Place, Kennington, S E

ENERGETIC Branch Manager, capable of working up a business "Hydrarg," The Pharmacy, Whitstable.

TEMPORARY: Assistant or Dispenser (24); now disengaged. "Chemist," Congreve Street, Birmingham.

AS Manager of Branch or Assistant (outdoors), by experienced qualified man; married. "Minor," 2 Islingwood Road, Brighton.

LOCUM-TENENS during absence; long experienced; gentlemanly address; qualified; country. "Ph. Ch.," 39 Powls Square, W.

BY a married man, at once, outdoors in good house; or as Dispenser to a surgeon. Address, B.A., Rose Cottage, Chipping Hill, Witham.

TEMPORARY or otherwise; qualified; good prescriber, extractor, &c. "Experientia," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMPROVER or Junior.—Dispensing practice wanted; aged 19½; small salary; good tooth extractor; time for study if possible. S. H., 51 Hyae Park Road, Leeds.

AS Manager; outdoors; 14 years' good all-round experience; Minor; height 5 ft. 7 in. Address, T. G., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, Board and Lodging in return for part-time services, by Minor student. Address, "Student," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tilly (Hill's Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s. 6d., post free.

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Director: Mr. G. S. V. WILLS, F.L.S., F.R.M.S., Fellow of the Royal Botanic Society, &c.

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FEES:—Minor, to the October Exam., £5 5s.; Major, £4 4s. To the December Exam.—Minor, £9 9s.; Major, £7 7s. Until Qualified—Minor, £12 12s.; Major, £10 10s.

Early application is requested from Students who intend to enter for the September Session. During the last Course 15 Students were unable to have regular benches and seats allotted to them in consequence of entering their names too late.

The object of this School is to impart to Students a thorough pharmaceutical and chemical education of the highest standard, and at the same time to fit them for passing the Minor and Major Examinations of the Pharmaceutical Society.

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At the Pharmaceutical Examinations held in JUNE the following Students of this College were successful:—

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„ W. WILKINSON	Bradford

MINOR.

Mr. W. C. BLAYNEY	London
„ R. B. CLARKSON	Newark
„ M. CURTIS	Malvern Link
„ J. MOUNTAIN	.. ..	Woodbridge
„ J. H. PAYNE	.. ..	Wainfleet
„ W. H. TOMPSETT	.. ..	Maidstone

At the Examinations held in JULY the following Students were successful:—

N.B.—More Students passed the Minor Examination from the Westminster College this month (July) than in any previous month since the establishment of the College.

MAJOR.

Mr. E. HOBSON	.. ..	Cheadle
„ H. WHITREAD	.. ..	Loughborough

MINOR.

Mr. J. E. ALLENBY, Helmsley	Mr. G. MARSHALL, Spilshy
„ E. BISHOP, London	„ F. MILLWARD, Carlisle
„ C. BREWER, London	„ J. S. MOULD, Louth
„ W. S. BROWN, Calster	„ H. J. NEESON, London
„ J. H. CARRÉ, Guernsey	„ B. A. NICOL, London
„ D. CHARLES, Llanelli	„ T. J. OAKLEY, Newton
„ L. R. DAIGLEISH, Lowestoft	„ G. O. OWEN, Carmarthen
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„ C. F. DAY, Maidstone	„ A. G. PYE, Atherstone
„ H. E. DWELLY, Maidstone	„ H. E. SLINN, Burton-on-Trent
„ D. A. EVANS, Llanbrynmair	„ T. SMITH, York
„ J. W. GOLIGHTLY, Durham	„ W. W. SMITH, Doncaster
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„ D. LEWIS, Llanrhystyd	„ F. N. WHITEHEAD, Morecambe
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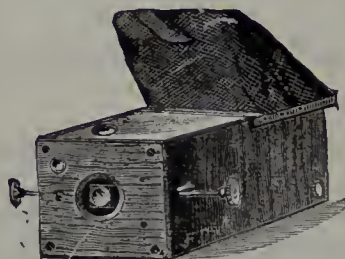


Fig. 13.

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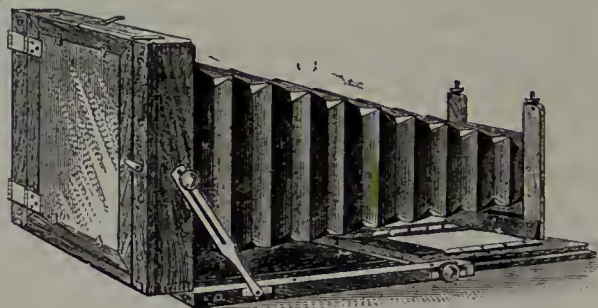


Fig. 14.

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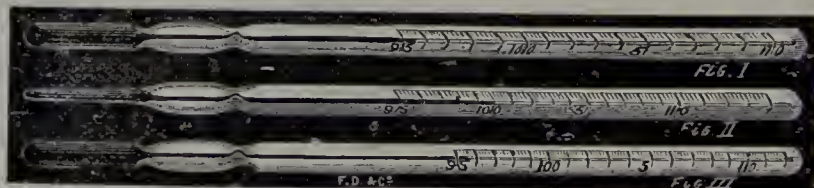


Fig. 16.

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Drawers, 12 ft. run, solid mahogany fronts, with bevelled-edge glass labels and glass knobs, shelving over and lockers under, very handsome, 15l. 10s., worth double. Philip Josephs, 54 Old Street, Goswell Road, London.

Counter, mahogany front, 12 ft. long, fitted behind with drawers, price 7l. 10s. Philip Josephs, 54 Old Street, Goswell Road, London.

6 ft. mahogany dispensing-screen, with plate-glass mirror and marble slab in centre, and glass case at each side, 5l.; a mahogany glass case, with writing-desk at the back to match screen, 2l. 5s.; a 10 ft. run of mahogany-fronted drawers with glass bevelled-edge labels, pilasters, shelving, mahogany-moulded cornice above, this fitting complete, 8l. 15s.; the same 6 ft. long, 5l. 5s.; a 9 ft. mahogany front and top glass-fronted serving-counter, with four glass doors to open in front, 8l.; dispensing-counter, shelving, show steps for windows or counters, 6 gallon carboys on mahogany stands, tooth-brush cases; a 6 ft. mahogany wall case, 9 ft. high, opens in front with 6 mahogany and glass doors—all to be sold very cheap. Bygrave, 111 Shepherdess Walk, City Road, London, N.

Dispensing-screens, very handsome; glass-fronted counters, desk and case, wall-cases, sponge-cases, and everything suitable for chemists; great bargains. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Second-hand shop fittings, show-cases, shop-rounds, specle jars, carboys, pill machines, utensils, and every necessary for chemists commencing, or fitting up branch shops, at half the usual prices; state requirements or call. Natali & Co., 181 Aldersgate Street, London, nearly opposite Maw's.

Miscellaneous.

What offers for the following?—25 $\frac{3}{4}$ doz. 1s. 6d. Butcher's medicines, 2 $\frac{1}{2}$ doz. Pulvermacher's goods (assorted), $\frac{1}{2}$ doz. 1s. 1 $\frac{1}{2}$ d. Butcher's embrocation, $\frac{1}{2}$ doz. 1s. 1 $\frac{1}{2}$ d. Jones' chemical ess., $\frac{1}{2}$ doz. 1s. 1 $\frac{1}{2}$ d. Crompton's pills, $\frac{1}{2}$ doz. 11s. Calburn's balsam, 1 doz. 1s. 1 $\frac{1}{2}$ d. Baxter's preserver, $\frac{1}{2}$ doz. 4s. 6d. ditto ditto, $\frac{1}{2}$ doz. 2s. 6d. Gale's saline, $\frac{1}{2}$ doz. 2s. 9d. Irgham's euphorbia pilulifera, $\frac{1}{2}$ doz. 2s. 9d. Josephson's oint., $\frac{1}{2}$ doz. 2s. 9d. Yarde's salveo pedes, $\frac{1}{2}$ doz. 3s. Rogers' specific, $\frac{1}{2}$ doz. 3s. Weide Meyer's cure, $\frac{1}{2}$ doz. 3s. Spencer's elixir, $\frac{1}{2}$ doz. 3s. Leband's pastills, $\frac{1}{2}$ doz. 2s. 9d. Whitehead's pills, $\frac{1}{2}$ doz. 2s. 9d. Smith's cough candy, $\frac{1}{2}$ doz. 2s. 9d. Trotter's tooth powder, $\frac{1}{2}$ doz. 2s. 9d. Woodward's pectin, $\frac{1}{2}$ doz. 2s. 9d. anti-callosity, $\frac{1}{2}$ doz. 2s. 9d. Silverton's nutrient, $\frac{3}{4}$ doz. 1s. Jones' composition, 1 $\frac{1}{2}$ doz. 2s. Cathary's aperient, 1 $\frac{1}{2}$ doz. 2s. 6d. Jenner's mixture, $\frac{1}{2}$ doz. 2s. Procter's draught, $\frac{1}{2}$ doz. 1s. Butler's hair wash, $\frac{1}{2}$ doz. 1s. Howe's mixt., $\frac{1}{2}$ doz. 1s. small Leslie's c. oil, $\frac{1}{2}$ doz. 1s. large ditto ditto, $\frac{1}{2}$ doz. 1s. 1 $\frac{1}{2}$ d. Ratcliffe's elixir, $\frac{1}{2}$ doz. 4s. 6d. Jamieson's vitaliser, $\frac{1}{2}$ doz. 1s. 1d. ditto electric tonic, $\frac{1}{2}$ doz. 1s. 1d. ditto ditto balsam, $\frac{1}{2}$ doz. 2s. 9d. ditto ditto oint., $\frac{1}{2}$ doz. 1s. 1d. ditto ditto pills, $\frac{1}{2}$ doz. 2s. 5d. ditto ditto ditto, $\frac{1}{2}$ doz. 1s. 1 $\frac{1}{2}$ d. Coffin's balsam. S. Wand, Chemist, Leicester.

Sherwin disc mill, almost new, cost 5l. 5s., cash price 60s. Thomas Hopkinson & Co., Wholesale Druggists, Nottingham.

5,100 boxes choice cigars, 8s. 9d., cost 11s.; 4,500 foreign, 7s., cost 10s. 6d.; 4,500, 4s., cost 5s. 6d. Slater, Beeston Hill, Leeds.

Jubilee creve'opes, with cards, for disposal, unsoiled. Offers to Pratt, care of Mrs. Janes, Beaudesert, Leighton Buzzard.

Over 3 doz. chemists' syphons, in 1 doz. cases; first best offer. 16B, Office of The Chemist and Druggist, 42 Cannon Street, E.C.

Offers wanted for Neo-Cyclostyle, not used more than half-dozen times; cost 25s., accept 15s. cash, or small camera in exchange. Griffin, Chingford, Essex.

Joh lots of mineral-water and other bottles; 100 gross split lemons; 50 gross 10-oz. square dark coffee extracts; 30 gross cherry handy quarts; what offers to clear? 85/61.

$\frac{1}{2}$ plate camera, lens and slide, 10s.; Lancaster's o. p. Meritoire, $\frac{1}{2}$ plate, 2 slides, and tripod, 20s.; Quain's "Dictionary," complete, 27s.; Norman's pill coater, 2s.; wanted 5 by 4 camera only. Townsend, Chemist, Bradford.

WANTED.

Set of tooth-forceps, in good condition, modern. H, 293 Uxbridge Road, W.

A skull in good condition, with teeth in. Danlop, Chemist, Hull.

Shop-fittings, &c.—All descriptions purchased for cash. Natali, 184 Aldersgate Street, E.C. New English hoey. State price, carriage paid, to Jarvis, Chemist, Handsworth.

Surgery bottles, one and two pint stoppered narrow month; 4-oz. wide month. Robinson, 71 Grove Street, Leek.

Crippen tricycle; state make, condition, gear, size of wheels, lowest price carriage paid. G. M, 45 Picton Road, Wavertree, Liverpool.

THE SURGEONS' LINT,

V.B. QUALITY.

The superior quality of Newsome's Absorbent Surgeons' Lint is universally admitted. The V.B. quality is quite pure and of great superficial area and exquisite softness. The O., D., E., and F. qualities are equally pure and absorbent; E. is stronger in fabric.

NEWSOME'S BLEACHED ROLLED BANDAGES, 3 in., 2 $\frac{1}{2}$ in., 2 in. Also SURGICAL ABSORBENT OPEN BANDAGES.

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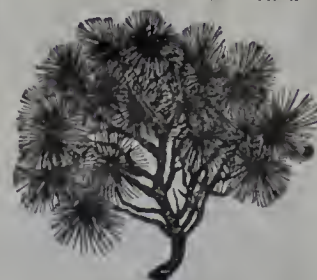
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Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

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For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

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Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be *taken internally*, in doses of 2 to 5 drops.

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For Gout, Rheumatism, and Skin Disease; used in BATHS, Ointments, and Liniments.

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For all Skin Affections, Irritations, Insect Bites Burns, &c. This Ointment is a fine smooth homogeneous application. It gives immediate relief in the intolerable itching of Eczema, &c. It is unrivalled both as a medicinal agent and toilet requisite.

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Is a carefully neutralised superfatted Soap, containing no free alkali, and is a Lubricant instead of a Desiccant to the skin. It is peculiarly adapted for use to the delicate skin of ladies and children. It leaves the skin smooth and satiny, and beautifies the complexion. The "Pumiline Essence" which it contains makes it a powerful disinfectant.

"PUMILINE" DRY INHALER

Most effective and convenient pocket inhaler for use in Throat or Lung Troubles. Is invaluable for use during a fog or mist.

G. & G. STERN have so arranged their Price List that a *very large margin of profit* is left to Chemists and to the Trade generally. In consideration of this, as well as the fact *that no other* Pine Preparations are in any way equal to "PUMILINE," Chemists will find it much to their advantage to stock the "Pumiline" Preparations.

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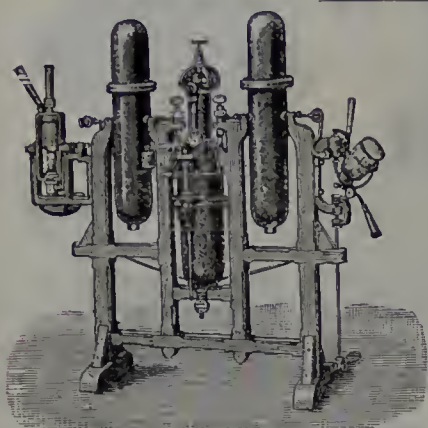
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"PUMILINE" ESSENCE.....	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
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"PUMILINE" JUJUBES.....	1/1½ and 2/3 per box	10/6 and 20/ per dozen
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"PUMILINE" SOAP...(box of 3 cakes)	1/6 and 9d., and 1/ per tablet.....	15/, 7/6, and 9/ per dozen.
"PUMILINE" PLASTER	1/1½ each	9/ per dozen.
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INDISPENSABLE TO CHEMISTS:
THE ONLY PRACTICAL SODA WATER MACHINE.
 Self-working by Chemical Action. No Skilled Labour.
 NOT LIABLE TO GET OUT OF ORDER OR NEED REPAIRS.
Produces the Purest Aërated Water made.

Machines, in two sizes, at 25 guineas and 30 guineas. All complete. With the smaller a lad can make easily in ten hours twenty dozen Syphons or 100 dozen Bottles; with the larger, thirty dozen Syphons or 175 dozen bottles.

COUNTY LABORATORY, 30 BROWNLOW STREET, LIVERPOOL, October, 1889.

I have examined during the present year the Machines for making Aërated Waters invented by Mr. Lozé, and I have formed a very high opinion of them. No lead is found in any part which comes in contact with the water, and the process is one which produces absolutely pure Carbonic Gas. Accordingly I find that the effervescing water produced is free from every injurious metal or contamination, and has a better flavour than that produced in the ordinary way.
 J. CAMPBELL BROWN, D.Sc.

CHEMICAL LABORATORY, 20 ALBERT GATE, MANCHESTER, 21st August, 1889.

GENTLEMEN,—At your request I have visited the works of Messrs. A. Lozé & Co., of Prescott Street and Tuebrook, Liverpool. I have inspected his patented Apparatus for producing Aërated Waters, and have analysed the Aërated drinks manufactured. The results of analysis quite justified the inferences which were drawn from a knowledge of the materials used. Thus, instead of using ordinary whitening (as the source of carbonic acid gas), which gives off small quantities of offensive gases when acted upon with acid, Mr. Lozé uses one of the pure soluble bicarbonates of either Potash or Soda; the use of this salt enables the apparatus to be much simplified in form, as no gas washer is required, but the carbonic acid gas may be led at once into the liquid in the Saturating Cylinders. The Aërated drinks produced are of very high quality, both as to purity and as to Aëration, and the apparatus possesses the merit of extreme simplicity and efficiency.—Faithfully yours,
 C. ESTCOURT, F.I.C., F.I.L.

Messrs. A. LOZÉ, & CO., LIMITED.

Dear Mr. Lozé,—I am pleased to inform you that I have been able to work the Machine sold to me by you without previous knowledge. With your patent Turnover I can bottle Patent Stoppers at the rate of two dozen per minute. Syphons and Corked Bottles I can fill much quicker than what you advertise the Machine to do.

The Aërated Waters produced have been sampled by a number of gentlemen, and pronounced by them to be of a most excellent quality.—Wishing you every success, I remain, yours truly,
 ROBT. J. GOW, F.C.S.

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BEFORE YOU HAVE GIVEN

DE CARLE'S SOLID FRUIT JUICES

A TRIAL,

But send at once 10/6, and have a 3-doz. Case to retail at 4½d. per Packet, assorted flavours, viz., Lemon, Orange, Raspberry, Pineapple, Cherry, Lime Fruit, Ginger, &c., together with an abundant supply of Handbills, a Show-card in seven colours Free, and Samples for counter distribution, **Carriage Paid** to any address in the United Kingdom, on receipt of Postal Order for 10/6.

REPEAT ORDERS AND TESTIMONIALS CONTINUE TO COME IN FROM ALL PARTS.

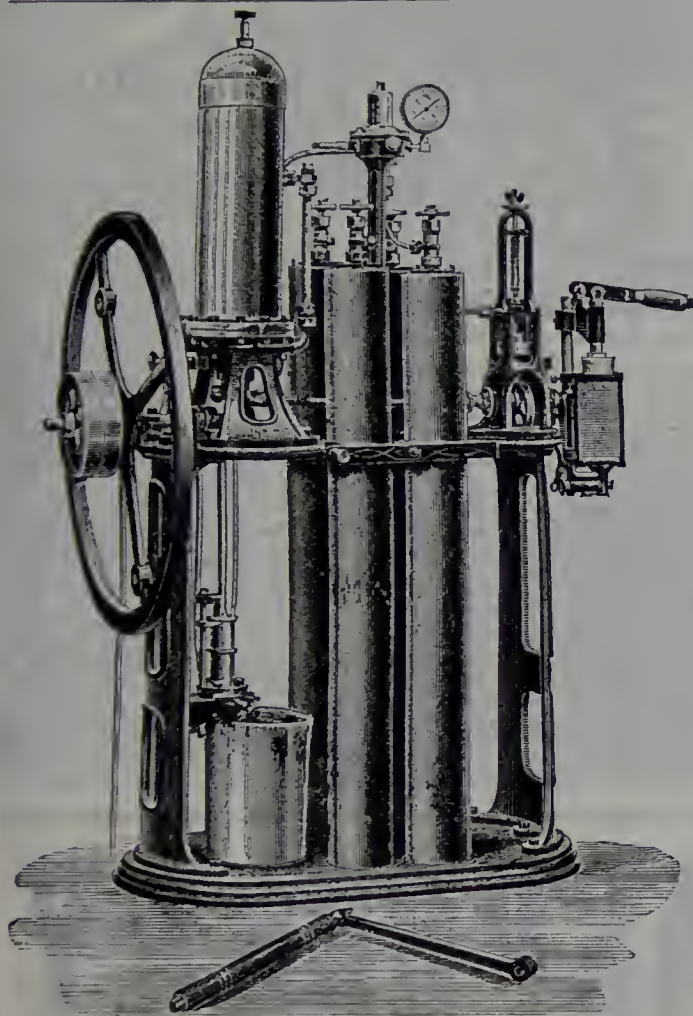
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From whom Samples, Prices, and full particulars can be obtained.

Obtainable through all London Houses; also EVANS, GADD & CO., EXETER; FOGGITT, THIRSK, &c., &c.

SODA-WATER MAKING

With Liquefied (So-called Natural) Carbonic Acid Gas.



The "Compact" Machines are designed where space is an object and for those having a large retail trade, such as Chemists, &c., for filling Bottles or Syphons, and are fitted on the one end with either the "Reliance" Syphon Filler or the "Excelsior" Machine for filling Patent Bottles.

No. 1 Size "Compact" Soda-water Machine complete, as shown, comprises a Niagara Cylinder, mounted, complete with all fittings, Reducing Valve, and a Bottling Machine for Syphon Bottles or for Patent Bottles, the latter fitted with Syrup Pump, the whole mounted on a massive cast-iron frame, fitted with shaft, flywheel, with fast and loose pulleys, for steam or other power, and also handle for hand-power.

By opening one of the iron vessels, and setting the Reducing Valve to the required pressure, a stream of gas is let into the Cylinder; pumping the water into the Cylinder by means of the flywheel may then be commenced, and as soon as it shows in the Water Gauge, bottling may be started, and continued while the water pump is being worked. About 50 dozen bottles per hour can be bottled with ease by hand-power.

Price complete, £60.

No. 2 Size ditto ditto, with a producing capacity of 25 dozen bottles per hour—

Price complete, £40.

LIQUEFIED CARBONIC ACID GAS, in iron vessels containing 28 lbs., which is sufficient to aerate 20 gross of waters, or 3,000 to 4,000 draughts from the Pillar Fountain, as shown below, 10/- each.

Specimens of Testimonials we are receiving from users of the "Compact" Machine.

From A. THOMPSON, Esq., M.P.S.,

The Putney Drug Stores, 58 High St., Putney, S.W.

"I am more than satisfied with the No. 1 'Compact' Machine which answers my utmost requirements. I find with the aid of a youth I can fill six dozen syphons per hour, including syringing. I have nearly trebled my sale this last three weeks."

From E. H. TAYLOR, Esq.,

Middle Abbey Street, Dublin.

"The No. 2 'Compact' Soda Water Machine came to hand the day previous to the Great Annual Temperance Fête at Ball's Bridge, where it had an engagement to supply 15,000 visitors, or over 200 dozen of waters. I felt nervous, not having a knowledge of the machinery. However, I got it together without a hitch, and after two dozen being bottled, I cannot describe the weight I got from under. I saw that we could turn out double the quantity, as even with temporary fixing, it filled 42 dozen per hour, and with a better trained attendant, will, I am sure, go close on fifty. I wired you this afternoon to know when you can deliver another No 2 Machine, for a party who came a distance to see it work to-day. Congratulating you on your success."

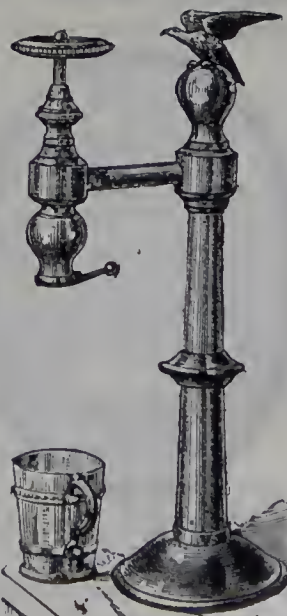
From Messrs. TURNER, SCHON & CO.,

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"We thought we should have great difficulty in the manufacture of aerated waters to which we were absolute strangers. Now that your No. 1 'Compact' Machine is fitted up and we have had an opportunity of working it, we find it is simplicity itself, and are surprised it should be possible to put such an effective and complete machine into such small compass. We think the machine will prove a great success, and we shall be happy to show it to intending purchasers."

PILLAR FOUNTAIN.

For a Single Draught Arm fixed on Counter, as shown by this drawing, there is nothing more convenient, the great advantage of it is, that a small sharp stream of Aerated Water can be drawn, which, when Syrups are taken, is absolutely necessary, so as to mix up the Syrup with the Water first, and then a large stream, as in the emptying of a bottle of soda water can be drawn; where soda water alone is required, the latter retains its sharpness and pungency, and thus, by the use of this Draught Arm, there is no necessity of drawing the soda water into a bottle first, and then emptying it into a tumbler, thus is avoided the loss of gas, and also the loss of time; but by drawing direct into the drinking glass a more satisfactory result is obtained. It is of very solid construction and thickly plated.



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HOP ALE AND GINGER ALE ESSENCES.

Besides GOLD & SILVER Medals, these Essences have obtained the HIGHEST TESTIMONIALS from all the Medical Journals & from the Principal Trade Journals in this & other Countries.

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A delicious beverage, non-alcoholic and perfectly pure; guaranteed to be prepared from fresh and specially selected Fruit only.

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LEMON-RASPBERRY is bottled in special bottles, and is attractive in appearance and agreeable in flavour.

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Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each.

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One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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Delicious Custards without Eggs. In Boxes, 2s., 6d., and 1s. each.

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ENLARGEMENT OF SIZE.A Sixpenny Bottle makes EIGHT GALLONS of
HERB OR BOTANIC BEERA NON-INTOXICATING BEVERAGE
Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.**BEWARE** of mean and fraudulent imitations.**BEWARE** of others copying our title.**MASON'S** is the original and only genuine.**MASON'S** is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

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Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

Sold in Bottles at 6d., 1s., and 2s. each.

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1-lb., 2-lb., and 4-lb. Bottles	...	per cwt.	69/	80/
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charged and allowed for when returned.**CHAS. SOUTHWELL & CO., Dockhead, S.E.**

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ESTABLISHED 1835.

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LEMONADE AND GINGER ALE.**Each Bottle is protected by a Label bearing the Signature
of the Firm.Purity and Excellence of the Water certified by Analysis
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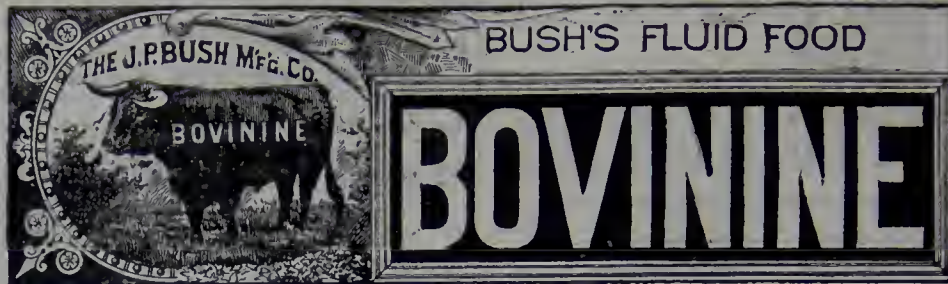
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KEEPS
PERFECTLY,



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BOVININE consists of the juices of lean raw beef obtained by a mechanical process, neither heat nor acid being used in its preparation. The nutritious elements of lean raw beef are thus presented in a concentrated solution, no disintegration or destruction of the albumen having taken place. The proteids in solution amount to twenty per cent. of the weight of the preparation, and give to it the great dietetic value it possesses in all conditions where a concentrated and readily assimilable food is needed.

BOVININE is entirely distinct from the numberless meat preparations prepared with heat. It is a Food, pure and simple, Highly Concentrated, and the most Nutritious yet presented.

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BOVININE has been prescribed and enthusiastically endorsed by thousands of Physicians and Surgeons in the United States and Canada for the past Twelve Years. We are systematically introducing **BOVININE** to the notice of the Medical Profession of Great Britain, and many are prescribing it daily. It is sold at prices within the reach of all.

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In Bottles, 12 oz. (4s. 6d. size), 38s. per dozen; 6 oz. (2s. 9d. size), 24s. per dozen.

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DENAEAYER'S LIQUID STERILISED PEPTONE OF MEAT.

Highly sterilised and concentrated, the only rational one, free from microbes, acknowledged the most efficacious means of restoring STRENGTH, DIGESTION, and APPETITE.

It suits the most fastidious stomach, and is pleasant to the taste.

LIQUID STERILISED PEPTONATE OF IRON.

The most active and assimilable of all ferruginous preparations. Specially recommended in all cases where the stomach cannot bear iron in the ordinary forms.

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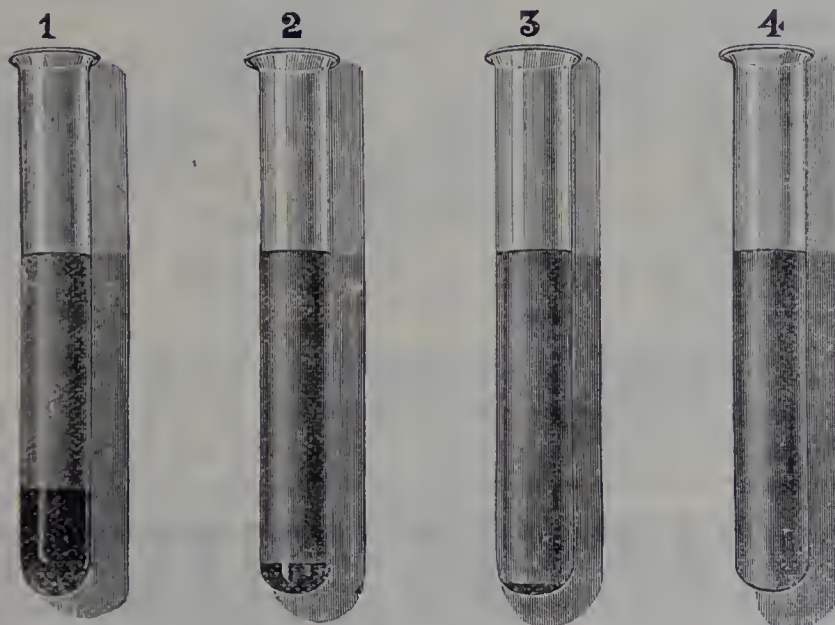
ALBUMINOIDS IN MEAT ESSENCES

By V. H. WYATT WINGRAVE, M.R.C.S.Eng., L.S.A.Lond., Lecturer on
Physiology at Cooke's School of Anatomy and Physiology.

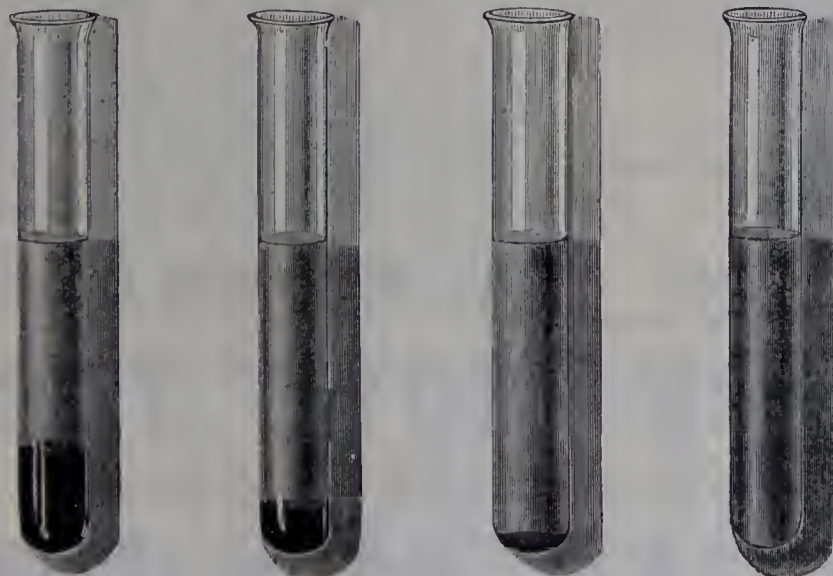
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	25 PILLS.	100 PILLS.		25 PILLS.	100 PILLS.
Alain	5/	18/	Quinine, Bisulphate.....	5/	18/
"	8/	20/	"	5/	18/
"	7/	24/	"	5/8	18/
"	11/	40/	"	7/8	28/
" Compound	7/	24/	"	9/8	24/
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" Strychnine and Belladonna	7/	24/	" Sulphate	5/	18/
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Prepared by RANKIN & BORLAND, Pharmaceutical Chemists, KILMARNOCK, N.B.

ESTABLISHED 1813.

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BITUMINOL, OR VASELINE SUBSTITUTE.

Uses of Malt.

LONDON.]

AUGUST 16TH.

[1890.

INFANT FEEDING.

Despite some theoretical claims about the possible activity of the enteric juice in infancy being able to digest starchy food, all nature tells us that such food is unnatural for the young of mammals. Korowin having pointed out that the diastase-secreting-glands are not developed to a considerable degree before the sixth month, and that not till somewhere near the end of the first year is their diastasic function well established. This fact alone should be sufficient to deter all from prescribing a starchy diet for infants. On the other hand the enormous rate of infant mortality supervening upon a starchy diet renders the inference conclusive, that starchy foods are about the next thing to poison for infants.

Physicians have reported cases where wasting infants have at once improved under the administration of Kepler Extract of Malt to the mother. Far more numerous reports have been uttered of infants benefited by the direct administration of this product in the milk. Half a teaspoonful to each pint of cow's milk makes all the difference in many cases between increased weight and health, and malnutrition and wasting. This Malt Extract renders the milk bland and assimilable, and therefore infinitely more nutritious.

NURSING MOTHERS.

It is probable that under proper dietetic management, many a mother might advantageously nurse her babe instead of being deprived of doing so. It has been said that nothing contributes better to reinforce the mammary secretion than the milk of some other mammal. Beer, stout, etc., also have a great reputation, particularly among the laity. The nutritive properties of such agents, however, are largely a myth. Alcohol is the product of germ decomposition, is poisonous to life, and, as one very celebrated physiologist avers, is about as much of a food as sulphur. The advantage that a good malt extract presents is, that in its manufacture from barley, no fermentation is allowed to proceed, and the nutritive ingredients of the grain are not consumed by the germs. In other words, beer is a solution from malted barley in which the nutritive elements have been consumed by germs. Kepler Extract of Malt is a solution of barley in which the nutritive ingredients are reserved for the future consumption by man. It is extremely difficult to estimate the exact worth of a food in deficient lactation, but so far as we are able to ascertain from reports, the Kepler Extract is the most reliable and efficient food-product in this condition.

GASTRIC AND INTESTINAL ULCERATION.

The cheesy nature of cow's milk has led some of the very highest authorities to interdict the administration of this fluid in gastric ulceration and typhoid fever, as well as in many cases of dyspepsia. Though milk is a nutritious and generally almost indispensable fluid in invalid feeding, there lurks in its administration a possibility of some harm. Perhaps no one has ever pointed out the disadvantages of milk in typhoid fever in more telling words than Sir William Jenner. The little work of Sir William Roberts, now laid aside and out of print, refers to the advantage of soluble foods in gastric ulcer. Kepler Extract of Malt, as we have pointed out, renders cow's milk particularly agreeable, and less likely to cause disturbance than when given plain. It also enhances its nutritive worth. It does not contain the slightest trace of starch or of any insoluble substance, and its place in therapeutics in the future will doubtless be as a substitute for Cod Liver Oil, when this cannot be given, as a vehicle for Cod Liver Oil and some disagreeable medicines, and as an adjunct to other foods in the sick chamber.

CONSTIPATION.

It is common for oatmeal and other substances to be administered in the hope of removing the constipation by mechanical irritation of the intestinal mucous membrane. The plan has been denounced as radically wrong. An idea, the exact counterpart of this, is to prescribe the Kepler Extract, which lubricates and is emollient rather than irritating. The plan of treating constipation with this improved food has worked well in many a case, the diastasic action of the product no doubt contributing in no small measure to the success achieved.

MODES OF ADMINISTRATION.

The Kepler Malt Extract may be advantageously used to sweeten coffee, hominy, rice, cornflour, gruels, &c., and is an invaluable adjunct to peptonised milk for infants and invalids. In aerated water, as seltzer, it forms a delicious diastasic "sweetwort"—an unequalled beverage for invalids. Spread on their bread, children like it extremely, and grow fat on it. It is a preventive of rickets. Added to peptonised milk and eggs well beaten, and then stirred up with a little brandy or whisky, the Kepler Malt Extract proves an admirable roborant. Puddings made with it are preferable to those given with sugar, being less apt to sour the stomach.

The Kepler Malt Extract and Kepler Extract of Malt with Cod-liver Oil (Kepler Solution) supplied to the Trade in bottles, containing $\frac{3}{4}$ lb. and $1\frac{1}{2}$ lb., at 22s. and 38s. per doz. Retail prices 2s. 6d. and 4s. Supplied by all Wholesale Houses.

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ADVERTISEMENTS of situations vacant and wanted, businesses for disposal, &c., will be received by us up till the first post on Friday morning.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. They having two cases in and the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the price for 1s., or by parcels of 1s. 3d., or two for 3s. We cannot forward them to any house for exposure, nor by any of the carriers, as in the latter case we have to pay for booking.



Literary Notes.

On the Percentage Relation of Absolute Alcohol and Proof Spirit of the Alcoholic Beverages in Ordinary Use. By Harry Napier Draper, F.C.S.

THIS is a reprint of a paper communicated to the Royal Dublin Society. It is explanatory of a table accompanying it, which shows at a glance the percentage of absolute alcohol, proof spirit, and 10-under-proof spirit in various alcoholic liquors. The table cannot fail to interest many people.

A Treatise on Practical Chemistry and Qualitative Analysis. By Frank Clowes, D.Sc., Lond. 5th edition. London: J. & A. Churchill. Post 8vo. xvi. + 396 pp. 7s. 6d.

THIS is a popular book—popular because it goes over the ground required by most students of chemistry from the outset to their qualification before various examining boards. In fact, the author makes no secret of the fact that his "book is intended to furnish a course of laboratory instruction in practical chemistry, which may precede the higher training of the professional and pharmaceutical chemist and the medical man, and the more special training of the technical chemist and the chemical engineer." It is divided into seven sections: the first deals with apparatus, the second with the preparation of gases and the like, the third contains lucid descriptions of manipulation, the fourth deals with analytical reactions of bases and acids, the fifth with tests for simple salts, and in the sixth we enter into more complex analysis, finishing with the reactions of organic substances including alkaloids, sugar, &c. The last section deals with laboratory fittings. The scope of the book, it will be seen from this summary, is wide, and what is particularly marked throughout is that the author succeeds in describing detail in such a manner as to interest and instruct the student as the complexity of the work increases. The pharmaceutical part, which more especially interests us, is well adapted for the requirements of the examinations, especially in the inorganic part. The alkaloids are not a happy selection, although they are what text-books as a rule take in. This part would be improved if there were tests for cinchonidine, quinidine, cocaine, codeine, atropine, and other pharmacopœial alkaloids. If these were also added to the table for detecting organic substances, Professor Clowes would greatly enhance the value of the book to students preparing for the Major examination. Taking the book as a whole, it may be said that we have few which are so trustworthy and well arranged.

Manual of Pharmaceutical Testing.

THIS work is offered in uniform style with "The Art of Dispensing" (which it ably supplements) published by THE CHEMIST AND DRUGGIST a year since. . . . We are impressed with the thorough appreciation of the needs of the pharmacist which have been studied in the compilation of this manual. It is written as if the writer were surrounded by the equipment of the ordinary prescription department, upon which he must depend for carrying out his tests and for substantiating his statements. From this fact it is a book to be constantly consulted by the dispenser, who need study no scientifically written and scientifically dull treatise on exact chemistry, or enter into complex analysis and mathematical calculation to prove the worth or worthlessness of the materials he handles. The style and diction are plain and simple, but straight to the point. Though adapted to the British Pharmacopœia, its use is by no means to be confined to British dispensers; we can commend it to our readers as a valuable book to own, as it is of just the character desired in a manual for the man of business. We congratulate its author upon the rare ability he has shown in the preparation of the work, the publishers upon its tasty appearance, and its present and future purchasers upon its possession as a guide and assistant in their work.—*Pharmaceutical Era* (Detroit).



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.O.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of three salts of common occurrence. The mixture is to be submitted to a thorough systematic examination; its constituents are to be detected, and all other substances proved absent.

Students' applications for portions of the mixture will be received up to Wednesday, August 20, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, August 30. Each report should contain a concise account of the work done, and should include a list of the constituents detected, distinguishing any which may be regarded as accidental impurities.

REPORTS.

The mixture which formed the subject of the last exercise consisted of hydrogen-potassium tartrate, sodium sulphate, and ammonium bromide in equal parts. The calculated composition of 100 parts of this mixture was as follows:—

K	..	..	..	..	..	6.92
Na	..	..	..	..	..	4.76
NH ₄	..	..	..	..	..	6.12
H	..	..	..	..	..	18
Br	..	..	..	..	..	27.21
SO ₄	..	..	..	..	..	9.94
C ₄ H ₄ O ₆	..	..	..	..	..	26.24
H ₂ O	..	..	..	..	..	18.63

100.00

The chief difficulties presented by this exercise were the recognition of the bromine and of the tartaric radicle. To the student who is quite familiar with the character of silver chloride in the form of a precipitate, and its behaviour with reagents, the difference between it and the bromide is sufficiently obvious. The freshly-precipitated chloride is pure white, the bromide is yellowish white, and rapidly becomes darker. On treating the precipitate with ammonia to observe its solubility, the chloride dissolves instantly, the bromide dissolves slowly. The liberation of bromine from its compounds by means of free chlorine in solution is a delicate and convenient test, especially when carbon bisulphide or chloroform is employed as a solvent for the liberated bromine. To ensure that the chlorine water is all right, it is well to try the test with a solution containing a small quantity of a bromide. A suitable solution of chlorine may be conveniently prepared by warming a crystal of potassium chlorate with three or four drops of hydrochloric acid, and as soon as chlorine begins to come off rapidly, adding about two cubic centimetres of water.

The smell produced when a tartrate is ignited is distinctly different from that produced by a citrate, but this test alone is not sufficiently distinctive. The production of a precipitate in the cold by calcium chloride, and the behaviour of this precipitate with a solution of sodium or potassium hydrate, afford a convenient means of distinguishing a tartrate from a citrate.

PRIZES.

The First Prize for the best analysis has been awarded to A. HOWARD, Ely.

The Second Prize has been awarded to S. PHILLIPS, Lee Lane, Norwich.

Marks Awarded for Analyses:

A. Howard (1st prize) ..	100	Cyanthus ..	78
S. Phillips ..	99	J. H. Eanson ..	78
Potassium ..	93	Glucose ..	77
Danwer ..	98	Selvad Mailliw ..	76
In virtute tenax ..	93	Moyhitt ..	75
Seldj ..	97	A. Stephens ..	74
Colobium ..	97	W. H. Goy ..	73
L. J. ..	96	C. Eynon ..	72
J. Martin ..	93	Pharmacist ..	71
J. W. Haines ..	96	Cave alsum ..	70
Encalyptus ..	95	W. J. C. Coulthard ..	70
Felix ..	95	Fidelis ..	68
Drupe ..	95	Minore ..	65
W. H. L. ..	94	C. E. Ashby ..	63
J. T. Bowker ..	92	Effervecence ..	60
Dexter ..	92	Neidon ..	50
Ferrum ..	90	T. H. W. ..	43
Fac pacem ..	85	Salol ..	45
H. Bowden ..	83	G. J. ..	40
Kudos ..	82	First attempt ..	35
R. M. Williams ..	80	Apprentice ..	20
T. Guttridge ..	80	F. J. N. ..	0

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

An scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

An scientific book which is sold for about five shillings may be taken as a second prize.

••• All communications should include the names and addresses of the writers.

EUCALYPTUS.—You omit the preliminary examination in the dry way, from which a great deal of valuable information is usually derived.

DRUPE.—Your results were so far correct, but there was nothing in your report to show that the substances you detected were the sole constituents of the mixture. It is quite as necessary to prove the absence of one substance as the presence of another.

W. H. L.—The sulphuric radicle is so easily separated in the form of barium sulphate that a very good idea of the quantity present can always be formed; in this case there could be no question about a sulphate being one of the salts in the mixture, and not a mere accidental impurity.

J. T. BOWKER.—The cobalt nitrate test is not intended to be applied to substances readily fusible at the temperature of the blowpipe flame. Salts of the alkalis, which, when fused, dissolve cobalt oxide, however slightly, will become blue, just as borax does. The cobalt nitrate test is convenient for the recognition of the oxides of aluminium, zinc, or magnesium, bodies which are practically infusible.

FERRUM.—The flame coloration was certainly not such as a salt of potassium alone would produce; it was an unmistakable sodium coloration.

FAC PACEM.—Platinic chloride is a much better reagent for the detection of potassium. The results given by tartaric acid are not at all so sharp.

H. BOWDEN.—It is not quite clear from your report how you managed to employ enough barium chloride to precipitate the sulphate, and not to precipitate the tartrate. If there was more barium present than the sulphuric radicle required, you must have had a precipitate of barium tartrate when you neutralised the acid solution. The tartaric radicle behaves very nearly in the same way with barium as it does with calcium.

R. M. WILLIAMS.—It is not easy to understand how you could have heated the powder in a bulb-tube without having observed that carbonisation took place, and that a smell of burnt sugar was produced.

CYANTHUS.—Take two dry test-tubes; place a little tartrate in one, and about the same quantity of an acetate in the other. Heat the two salts gradually, and at the end strongly, and observe from time to time the effect produced, and particularly the smell of the gaseous products evolved. You can scarcely fail to observe the marked difference there is between the two salts.

GLUCOSE.—It seems incredible that you could have performed the experiments described in your paper and obtained such results. In the

absence of iodine, the liberation of bromine by chlorine water and the solution of the bromine in carbon bisulphide is a delicate test. You ought to repeat the experiment with a solution of a bromide. The chlorine-water you employed may not have been good; it loses its chlorine rapidly.

MOYHITT.—The precipitate which you mistook for a phosphate consisted of magnesium tartrate. Silver bromide is yellowish white, hence the colour of the silver nitrate precipitate.

W. H. GOY.—You observed that the powder charred when heated in a dry tube, but your summary of results does not include any organic compound.

PHARMACIST.—The water evolved when the mixture of salts was heated in a dry tube was alkaline in reaction, suggesting the presence of a salt of ammonium. Your test with potassium hydrate must have been carefully performed, as ammonia was evolved most unmistakably.

CAVE ADJUM.—You must have observed that the addition of an acid to the aqueous solution of the powder did not cause effervescence, and therefore a carbonate could not have been present. The explanation of your failure to obtain a precipitate with calcium chloride is that the salts of ammonium present dissolved the calcium tartrate.

W. J. C. COULTHARD.—The production of a white precipitate with barium chloride, insoluble in acid, did not leave much room for doubt as to the presence of a sulphate.

NEIDON.—You omitted to test for bromine and iodine.

SALOL.—You forgot to look for ammonium. The flame coloration of lithium is so intense that there should be no difficulty in applying this test to a precipitate, however minute it may be; you should have tried how your supposed lithium phosphate behaved in the flame.

G. J.—You relied upon one rather indefinite test for the detection of potassium. The silver precipitate required a more careful examination; you ought to have observed a yellowish tint, and a difficulty in dissolving it in ammonia which distinguish silver bromide from chloride.

FIRST ATTEMPT.—The red coloration that you obtained with nitric acid was due to bromine. You were not expected to examine the mixture for the alkaloïds.

APPRENTICE.—You will find the examination of mixtures of your own preparation very good practice.

Metropolitan Reports.

A STREET ROW.—Reginald Glynn, said to be a chemist, of Tachbrook Street, Pimlico, was charged, with two other men, at Marlborough Street Police Court on Monday last with assaulting the police. The prisoners were creating a disturbance in Tottenham Court Road, and on being taken into custody severely assaulted a constable. Glynn was ordered to pay a fine of 10*l.* or go to prison for a month. The other prisoners were also sentenced to a month's imprisonment each.

THE NEW CROSS TRAGEDY.—The inquests regarding the deaths of Emma Marie Louise Townsend, 33, wife of Dr. K. Townsend, and of William De la Motte, 30, student of the London Hospital, was resumed at Deptford on Monday. Dr. Townsend, in the course of his evidence, stated that he had known De la Motte for two years. They were intimate with each other, and he had the highest opinion of De la Motte's honourable conduct. Henry Robert Howell, stated to be a chemist, of 357 New Cross Road, deposed that the deceased lady, whom he knew as a customer, wished to purchase some prussic acid at his shop on August 1, stating it was for Dr. Townsend to poison a dog with, but he refused to serve her. Elizabeth Annie Pearce, wife of a Stratford builder, gave evidence that Mrs. Townsend had asked to be allowed to hide in her house for four or five days, and that no one would dream of her being there, as her husband was going away, and she did not want to go. She was crying very much. Dr. A. Forsyth, of 12 Park Place, East Greenwich, deposed that he had made a *post-mortem* examination in each case, and attributed the death of both to prussic acid. This opinion was corroborated by Dr. Shortt. The jury ultimately agreed that "in both cases the cause of death was prussic-acid poisoning, but how it came to be administered there was no evidence to show."

A MEETING OF SOUTH PADDINGTON CHEMISTS, and friends from North Paddington, North Kensington, and other parts of West London, was held at 1 Queen's Gardens, Hyde Park, on the evening of August 8, to consider the desirability of forming an association for the western portion of London. Mr. F. Andrews (divisional secretary

for South Paddington), in the chair, reported that he had received a large number of letters from gentlemen regretting that, either from their own or their assistants' absence from town, they were unable to be present. The writers, in every instance, expressed their entire sympathy with the object of the meeting, and most of them desired to become members when the association was formed. After considerable discussion, some of the speakers thinking that possibly it would be preferable to have an association wherever there was a divisional secretary, it was at length, on the motion of Mr. Mathews, seconded by Mr. Long, unanimously resolved "that it was most desirable to form an association of the chemists and druggists living in the western portion of London," and the committee of the North Kensington Association, with power to add to its number, was appointed a committee for the purpose of carrying out the resolution. Messrs. Martindale and Mathews were appointed delegates to represent the association at the Pharmaceutical Conference at Leeds. Votes of thanks were passed to Messrs. Mathews for their kindness in lending their rooms for the purpose of the meeting, and to Mr. Andrews for his conduct in the chair, and the meeting then terminated; but several gentlemen remained for a considerable time in friendly conversation upon various trade and other kindred topics.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

TAKING IT EASY.—During the past week, which is a great holiday time in the Potteries, some of the chemists of Tunstall closed from Saturday until Wednesday.

THE FIRST ADVERTISEMENT on the electric trams which now successfully run from John Bright Street to Bournebrook is that of a chemist who has recently settled down in Birmingham—Mr. Bayley, from Walsall.

PHOSPHORUS MANUFACTURE.—Messrs. Elwell, Parker & Co. are building a large phosphorus factory in the Black Country, and are about to produce this element by a process recently patented by Mr. Parker in conjunction with Mr. A. E. Robinson, of Birmingham.

THE PEREIRA MEDAL EXAMINATION.—Complaint is made in the provinces that the Pereira medal examination was held on a Monday. It is, however, satisfactory to learn that one candidate who travelled from Birmingham on the day of examination was allowed to enter the room a little later than the authorised time on presentation of his credentials from the secretary, Mr. Bremridge.

FREE SAMPLES.—*Appropos* of the British Medical Association meeting, the distribution of specimens and samples at the exhibition by the various exhibitors was most lavish. In one instance a very well-known cocoa manufacturer sent to many of the profession an elaborate specimen box of their manufacture, which included a whole cocoa fruit and a goodly supply of the various cocoa seeds, nibs, shells, butter, and finished products of cocoa and chocolate.

CHARGE OF EMBEZZLEMENT.—At the Brierley Hill Police Court, last Monday, Howard Jones Brettell (35), residing in Bank Street, Brierley Hill, was charged with embezzling 2*l.* 18*s.*, the money of his employer, Mr. Joseph Bloomer, chemist, High Street, Brierley Hill. The evidence showed that the defendant had been employed by prosecutor as agent, and had not accounted for the money in question. He had been handed over by the Worcester police. The stipendiary sentenced the prisoner to three months' imprisonment.

PROSECUTION UNDER THE DENTISTS ACT.—At the Aston (Birmingham) police court on Friday, George Day Horton, chemist and druggist, Aston Road, was summoned, on behalf of the Dental Association, for unlawfully using, on July 17, the title of "dentist" without being duly registered,

contrary to the provisions of the Dentists Act of 1878. Mr. H. B. Dain (Messrs. Milward & Co.) prosecuted; and Mr. Parfitt, barrister (instructed by Messrs. Cottrell & Sons), defended. It was alleged that the defendant, who was unregistered, sold two articles bearing labels, "G. D. Horton, practical chemist and dentist," and the matter was brought before the Dentists' Association by Mr. Eli Wright, a local dentist and druggist. Mr. Parfitt, on behalf of the defendant, explained that the labels had been used inadvertently, and against the wish of the defendant, who was fined 20s. and costs. On the suggestion of one of the magistrates, the defendant consented to the labels bearing the word "dentist" being destroyed.

BOSTON (LINCOLNSHIRE).

A DOCTOR ON CONSULTING CHEMISTS.—An inquest was held at Boston, Lincolnshire, last week, regarding the death of Lily Hackford, aged three, the daughter of a moulder, who six days previously had fallen into a bucket of soap-suds. The child was immediately taken to Mr. R. A. Munkman, chemist and druggist, who dressed the scalds with caron oil. The child progressed favourably until the Monday, when the mother thought it would do the child good to take it out, which she did, but when they returned home the child took a fit. Dr. Arthur Tuxford was sent for, but the child never came out of the fit, and died soon after the doctor's arrival. Dr. Tuxford considered the circumstances of the case so serious that he declined to give a certificate as to the cause of death: he said it was a case which demanded an investigation. The mother's evidence showed that Dr. Tuxford was sent for about ten minutes to two, and he promised to attend in about ten minutes, and although another person went for him a second time, he did not arrive until a few minutes past three. All this time the child was getting worse. Dr. Tuxford said they might put the child in a warm bath, but he would not say that the child would not die in it, and she thought it advisable not to give the bath. Shortly afterwards the child died. After some other evidence, the coroner sent for Dr. Tuxford, and when he came he was informed of the facts of the case, and his opinion asked. To this Dr. Tuxford replied that the woman had been foolishly persuaded to go to one of these consulting chemists to get some stuff for it, and instead of getting some stuff to cool it, they got some stuff that excited it. The child died of convulsions brought on by the irritation of the scalds. He gave some directions, but said, "If you carry them out, it will perhaps die, and then you will blame me." One of the neighbours told him that on the day before it was so bad they recommended them to fetch a doctor, but they wouldn't. The secondary feverishness caused by being taken out in the heat of the day brought on the fit. Dr. Tuxford went on to say they are a horrible class of imposters, these so-called consulting chemists. People believe anything they tell them. Between the cupidity of the one and stupidity of the other the child never had a chance to live—it had never been given a chance to live. It was a fine, healthy child. The Coroner: You wouldn't give consulting chemists a chance to live? Dr. Tuxford: I wouldn't. I would have them all exterminated. They are as bad as bone-setters. My opinion is that the child died through not having proper treatment, and through the stupidity and ignorance of its parents. The Coroner: Did you see the stuff that was put on? Dr. Tuxford: No; I was interested in the child's life. The Coroner: You think that death is to be referred to the treatment? Dr. Tuxford: No, but there were cloths enough to swamp any child's arm to begin with. The poor little thing was dying, and there was nothing to be done. The Coroner: You don't impute any blame to the mother except in going to the chemist? Dr. Tuxford: I don't think she would do anything wilfully wrong, but through her stupidity and the cupidity of the consulting chemist, the bairn's dead. If they had had proper medical advice, no doubt it would be alive now. If people will be persuaded to go to these quacks, they must pay the penalty, and this child has paid the penalty. The coroner addressed the jury, who returned a verdict to the effect that the child died from convulsions, and added that they did not consider any blame was to be attached to the mother or the chemist.

NEWCASTLE.

INCORRIGIBLE.—At the Tynemouth Petty Sessions on August 11, Daniel Camphell, a labourer, was bound over to keep the peace for six months, himself for 10s. and two securities of 10s. each, as concerned Mr. Thomas Stewart, manager for Messrs. Tennant and Partners, chemical manufacturers. In 1887 the defendant intended bringing an action against the firm under the Employers' Liability Act, for injuries sustained while at work in the employ of Messrs. Tennant. During his illness his employers paid him half his wages, and medical assistance was provided for him. In consequence of what took place after the accident, the firm paid to the defendant 40s. in settlement of all claims. On subsequent occasions, however, Camphell pestered Mr. Stewart for more money, and twice he had been sent to prison for threatening him. On this occasion the defendant passed Mr. Stewart's house and looked at him in a very conspicuous way while he was sitting at his drawing-room window. In consequence of this conduct, and what had occurred previously between them, Mr. Stewart had a grave apprehension of danger. Camphell absolutely refused to find securities, and said that he would go to prison.

POTTON, (BEDS.).

AN ECCENTRIC CHEMIST.—Mr. Thomas John Lindars, chemist and druggist, of this town, died recently. He was rather an eccentric man, a bachelor, and lived entirely by himself. We understand that for some years the deceased has had the sum of 2,500s. lying idle in the Bedford Bank. His property has been left to various priests in the town, and having no relations, a considerable number of priests and others will receive legacies. The remains of the deceased were placed in a plain oak coffin, with black furniture, edged with gold, which was brought downstairs and placed in the middle of the shop, where part of the Burial Service was read by the vicar, and the remainder of the service conducted in the cemetery, the principal mourners being Mr. Harrison, Dr. Walker, and Messrs. Tongue and Vernon. The funeral cortège also comprised a large number of the principal inhabitants.

LIVERPOOL.

CARBOLIC-ACID POISONING.—Mrs. Ellen Gray, wife of an accountant, drank carbolic acid on Thursday last week, and died in the Infirmary the same night. The deceased had for the past fifteen years been suffering from hysterical monomania, and had been under close watch.

MEDICAL FEES.—Dr. Day has recently sued a farmer for 365s. 6s. for attendance on the latter's wife. Amongst the items was "Long conversation with Mrs. Sykes on some quack remedy which she recommended and I declined, 10s. 6d." Another was "for writing to a specialist, 7s. 6d." Dr. Day got 180s. 5s., or a little less than half of the bill.

IRELAND.

THE BELFAST AND LISBURN AERATED AND MINERAL WATER COMPANY have started business in Lishurn.

WHAT A FALLING-OFF WAS THERE!—The stately premises at Belfast, lately occupied by the Apothecaries' Hall, have been relegated to the proprietors of a penny wax-works.

CONTRACT.—The Commissioners of Rathgar, Dublin, will on August 26 appoint a contractor for the supply of oils, colours, disinfectants, &c., on the terms of the ordinary drug contracts.

CREDITORS of the late Richard L. Gore, chemist and druggist, Dublin, are requested to communicate with Mrs. Susan Gore, widow of the deceased, to whom probate of the will has been granted.

PROSPEROUS.—At the eighteenth annual meeting, just held, of the shareholders in W. & H. M. Goulding (Limited), Dublin and Cork, an excellent balance-sheet was submitted, and a dividend of 7 per cent. free of income-tax declared. The net profits for the past year were 22,229l. 7s. 7d.

FAILURE.—The *Dublin Gazette* states that Mr. Frederick W. Bogan, chemist, Patrick Street, Cork, has been adjudged a bankrupt, and that he will appear in the Cork local Bankruptcy Court on August 22 for proof of debts and choice of assignee, after which his final examination will be held on September 12.

PHARMACEUTICAL COUNCIL.—The usual monthly meeting of the Council of the Pharmaceutical Society of Ireland was convened for Wednesday, August 6, at the Society's rooms, No. 11, Harcourt Street, Dublin. The following members attended:—The President, Mr. Charles Evans; the Vice-President, Mr. Wells; Dr. Burne, and Professor Tichborne; but as they were not a sufficient number to form a quorum, no business was transacted.

ETHER-DRINKING.—In the House of Commons on Monday Mr. Macartney put a question to Mr. A. J. Balfour in regard to ether-drinking in Ireland. This arose from a statement made at a Tyrone coroner's inquiry by a witness, who was under the influence of ether, and who said that her children bought a noggin, or half a pint, of ether for her when they went to market. The coroner, in summing up the evidence, said ether-drinking had obtained a terrible hold on the people of the locality, and that ether was procurable at any public-house within a radius of ten miles. Mr. Balfour, in reply, acknowledged the correctness of the statements, and said that inquiries were being made as to the traffic in ether throughout the country. In reply to Sir Wilfrid Lawson, he added that he thought that ether-drinking produced a very serious form of intoxication.—Mr. T. W. Russell asked whether the Chief Secretary would undertake to deal with the matter by legislation himself, or if he would support a Bill brought in by a private member.—Mr. Balfour: I believe the evil is confined to a relatively small district, and in this district I believe it is a very serious one. I will consider the matter with respect to this district.

A WORKHOUSE PORTER DISPENSING MEDICINES.—On Tuesday, at 12 o'clock, in the Board-room of the Cork Workhouse, an inquest was held on the body of Bridget O'Brien, aged 20, who had been killed by an overdose of medicine administered by a nurse. It appeared from the evidence that the deceased, who was one of a family of nine, was admitted to the workhouse hospital the previous Thursday almost in a dying condition from typhoid fever. On Sunday, at 1 o'clock, Dr. Cummins prescribed, as is usual in cases of the kind, a narcotic, which was duly made up in the surgery of the institution, and passed on to the nurse, Kate Horgan, with the instructions on the bottle to administer one teaspoonful at once; but the patient becoming delirious had the effect of snuffing the nurse to such an extent that, forgetting all instruction about the quantity that composed a dose, she poured the contents of the bottle, seven teaspoonfuls, into an ounce measure, and gave it to the patient. The latter at once became unconscious, and died four hours later from the effects of the illness, hastened by the overdose of paraldehyde. Denis Reorda, a wardmaster, was examined, and stated on last Sunday he made up the prescription by direction of one of the doctors. There was nothing to do but pour it from the stock-bottle to the bottle now produced. Witness labelled it and showed it to the doctor, who said it was all right.

The Coroner: Are you a licentiate of the Apothecaries' Hall?—No, sir. What do you know about medicine? Do you know anything about the Pharmacopœia?—Witness knew something about it. Mr. Allsom, the apothecary to the workhouse, had been teaching him.

To District-Inspector Concannon, who appeared for the Crown: It was he wrote the prescription on the bottle.

To a Juror: There were about a dozen stock-bottles in the surgery, and he was acquainted with their contents.

The coroner examined the medicine-bottle, and commented on the fact that it did not bear the word "poison" on the label.

Dr. Murphy, the resident surgeon, said the contents of the bottle was poisonous when taken in large quantities. The quantity that remained on her stomach after she had vomited would not kill her if she was in ordinary health. Witness thought she would have died in any case.

The Coroner: That does not matter; if she had only a minute to live she should not be poisoned. In summing up

he said the union must be cared for in a very loose way when a porter was allowed to take charge of the dispensing of the medicines. If the authorities thought that proper, he did not agree with them. He then directed the jury to bring in an open verdict in accordance with the medical testimony, which was agreed to. The nurse was arrested, and, having been brought up at the police-court, she was remanded for eight days.

SCOTLAND.

DUNDEE.

CRICKET.—The chemists' assistants met with another defeat on Wednesday. They had the temerity to meet the *Dundee Advertiser* team in the Baxter Park, in full knowledge of the fact that some of the best players in the district were ranked amongst their opponents. Result: Chemists, 18; *Tisers*, 56.

EDINBURGH.

THE CONFERENCE.—If the Town Council's invitation to the British Association to meet here in 1892 is favourably responded to, local pharmacists will do their best to give the members of the British Pharmaceutical Conference a good time that year.

"LADY MEDICALS."—After a long fight, the representatives of the female medical students have succeeded in extracting from the directors of the Royal Infirmary a pledge that they will be admitted to the institution on the condition that the professors and teachers of the Infirmary can see their way to give them the requisite accommodation. This is a cautious concession, as it is well known that the students of the University are more than enough for the Infirmary.

WHOLESALE PRICES OF PATENTS.—Mr. J. T. Coats writes to inform us that a fortnight ago he made an offer to three Edinburgh firms, to take patents in fifty-shilling lots, sending cash with order, and removing the goods at his own expense, provided the wholesalers supplied him at the same rates as for 10*l.* lots payable net within seven days. The above arrangement would, Mr. Coats thinks, bridge the difficulty. The wholesale houses would be saved the trouble, expense, and waste of time in invoicing and delivery. Then the retailers would all be on a level with any cutter. But Mr. Coats's offer was respectfully declined, and he thinks that the wholesale houses do not look at the matter in the right light. They are simply playing into the cutter's hands.

GLASGOW.

AN EXPLOSIVE MIXTURE.—An evening paper relates a case in which a tonic mixture dispensed by a West-end chemist exploded with such force when the patient was about to take a dose, that the fragments of the bottle were scattered all over the room. Happily, no one was injured.

NOXIOUS GASES FROM IODINE CHEMICAL WORKS.—At the last meeting of Irvine Town Council this subject was again discussed. Mr. McCormick protested that as they had taken the oath of fidelity to the Queen and the community, it was their duty to see that the public health was preserved. The fumes were not only malodorous, but they were visibly affecting the vegetation of the district. It was agreed to address a strong remonstrance to the offending firms.

The odour of ichthyol may be disguised by oil of citronella. The latter is itself employed in Ceylon, against rheumatism.

BREATH IS MADE OF AIR, writes a Kentucky schoolboy. If it wasn't for our breath we would die when we slept. Our breath keeps the life agoing through the nose when we are asleep. Boys that stay in a room all day should not breathe. They should wait till they get out doors. Boys in a room make carbonic acid. Carbonic acid is poisoner than mad dogs. A heap of soldiers was in a black hole in India, and a carbonic acid got in that black hole and killed nearly every one afore morning. Girls kill the breath with corsets that squeezes the diaphragm. Girls can't run or holler like boys because their diaphragm is squeezed too much.

General News.

TWO CHILDREN WERE POISONED, it is supposed, at Shipley, near Bradford, on Saturday. The mother states that she gave them a dose of domestic medicine before they went to bed, and next morning they were dead. The medicine is being analysed.

THE NEW YORK ASSISTANT who was charged with dispensing crystalline hyoscyamine, when amorphous was ordered claims that he made no mistake. On the contrary, he says, he called the physician's attention to the large dose ($\frac{1}{4}$ grain) prescribed, and was assured that "I know what I am about, and what my patient can stand."

CASTOR-OIL CULTIVATION IN HUNGARY.—The experiments in the cultivation of the castor-oil plant in Southern Hungary are being pushed forward energetically. At present there are over 400 different villages in which experimental plantations have been started. The season, however, has been very unfavourable owing to its unusual coldness.

CARBOLIC-POISONING.—At Aberdeen, on Saturday last, a young woman named Isabella Hutton, aged 18, residing at Regent Quay, drank a quantity of carbolic acid by mistake. Dr. Robertson was sent for, and promptly removed the girl to the police station, where the stomach-pump was applied successfully. The girl was able to go home shortly afterwards in charge of her father.

CAUGHT AGAIN.—John P. Phillips, the Windlesham chemist, who not long since went to prison for twenty-one days, in default of payment of a fine of 20*l.*, for taking some plants from a nursery at Bagshot, is now accused of having been so much attracted by another person's roses at Windlesham as to have transplanted the trees in his own garden without so much as saying "By your leave."

THE TRADE-MARK PROTECTION SOCIETY (J. M. Johnson & Sons, Limited) having gone into voluntary liquidation, one of its creditors has attempted to make the process compulsory, but when the matter came before Mr. Justice Kay last week he dismissed the petition with costs. It is stated that the business of the society is being continued by the Trade-mark Society (Limited), and that the voluntary liquidation referred to has caused no interruption.

THE CENTENARY OF HOMŒOPATHY.—The German homœopathic journals celebrated last week the centenary of the publication of Hahnemann's first work, which forms the basis of the homœopathic doctrine. The book is entitled "Cullen's Treatises on Materia Medica, translated from the English and enlarged, with explanatory notes, by Samuel Hahnemann." In it the famous theory *similia similibus curantur* is expressed for the first time.

ADULTERATED WINES AND SPIRITS.—In the House of Commons, on Friday, August 8, Mr. Isaacson put a question to the President of the Board of Trade regarding the price-list of wine essences, &c., which was published in the *Times*, and Sir M. Hicks-Beach replied that the Customs know nothing of the articles, and if anything sold as wine is shown to be adulterated, proceedings might be taken by the local authorities under the Sale of Food and Drugs Act.

AN INDIAN TOILET-SOAP WORKS.—A soapworks on European lines for the manufacture of toilet soaps has been established at Madnra, British India, which is a district said to be particularly well suited for the industry owing to its richness in Dhoibie's earth (carbonate of soda), which supplies the place of the alkali in England. The proprietors have secured the services of an experienced German specialist, and have been for some time manufacturing several kinds of soap, which have already found a market at Colombo and other places.

EVESHAM DISTRICT DRUG CONTRACTS.—At Pebworth it has been the rule that the medical officer should recommend, supply, and charge for cod-liver oil and quinine. It appears that the amount this quarter was 3*l.* 5*s.*, whereas in the whole of the other twenty-nine parishes the amount was only 1*l.* 4*s.* The price also was 2*s.* 6*d.* a pint in the Pebworth district, and the contract price was only 10*d.* for cod-

liver oil and 5*d.* for quinine. It was agreed that after Michaelmas next the same system would be adopted in the Pebworth district as in the other districts.

PHARMACISTS IN THE DUTCH INDIES.—A few years ago there was a great scarcity of military pharmacists in the Dutch-Indian army, and many German and Austrian apothecaries offered themselves to supply the vacancies, and were accepted. The Vienna *Pharmaceutische Post* has been making inquiries as to whether any more Austrian pharmacists are required for the army in Java and the other Dutch possessions, there being a terrible overproduction of apothecaries in Austria. It appears, however, that that opening is now closed to all but Dutchmen, as the Pharmaceutical School in Utrecht has a sufficient supply of pupils to fulfil all requirements. But in private pharmacies in the Dutch Indies occasional vacancies occur, for which foreigners stand a chance, and the remuneration for which is fairly satisfactory—viz., about 25*l.* per month.

SALE OF GINGER-BRANDY AT CAPE COLONY.—Lately Mr. Herman Bell, chemist and druggist, of Grahamstown, Cape Colony, was charged before the magistrates for selling ginger-brandy without a licence. The contention for the defence was that the brandy was sold medicinally, and this was upheld by the label on the bottle containing the liquor, which stated that it was "invaluable in nervous complaints, spasmodic affections, indigestion, flatulency, &c." A police inspector, at the instance of the superior authority at Cape Town, purchased a bottle of the brandy, and it was found to contain 56.8 per cent. of proof spirit, a sugar solution, and ginger extract. Several witnesses for Mr. Bell proved, however, that they purchased the brandy and used it medicinally only, and on this evidence the magistrates fully acquitted him of the charge.

ROUMANIAN EXTRACT OF MEAT.—From several quarters efforts are being made to establish meat-extract works on a large scale in Roumania, where cattle are abundant and cheap. Unfortunately, the Roumanian Government, in their anxiety to work up a salt industry in the country, have created a salt monopoly, under which the importation of salt for industrial purposes is absolutely prohibited. The Roumanian rock-salt produced under the protection of this monopoly is not only dear, but is impregnated with a flavour of petroleum, which renders it entirely unfit for use as an ingredient in any food-industry. Experiments have been made by some eminent German chemists to render the Roumanian rock-salt suitable for such purposes, but they have all been unsuccessful, and thus the existence of a monopoly providing dear yet nasty salt prevents the development of an industry for which the country would be eminently fitted.

CO-OPERATION IN UNITED STATES PHARMACY.—All sorts of rumours are afloat in the United States at present regarding projects for co-operation and combination in pharmacy. It is stated, as we have already reported, that there is to be a gigantic combination of the wholesale traders, the capital represented being \$50,000,000, and now we hear that the retail pharmacists want to do away with the profits of the middleman, and propose to form a co-operative company which will undertake, under the direction of competent and experienced managers, to furnish all goods and articles usually carried in stock, bought by, or required by druggists, at a minimum of cost. It expects to have branches in all large cities for the economical distribution and delivery of its goods and products, and by advantageous purchases, and strict economy and thorough understanding of the business, to save its members an average of at least 25 per cent. on their purchases. The proposed capital stock of the company is to be \$200,000. It is as well to state that the same thing has been tried in this country without success.

A HYGIENIC SURVEY OF TURKEY.—The Sultan has appointed two medical commissions of ten members each, and presided over respectively by Dr. Leftéraki and Macridi Pasha, for the purpose of visiting successively all the provinces of the Turkish Empire, and making a thorough examination of their hygienic condition. The commissions are also to inquire into the causes of the depopulation of certain towns and rural districts of the Empire, and their reports are to be submitted to the Sultan direct. It is not stated whether the sanitary condition of the Macedonian

prisons will also come within their purview. All the members of the two commissions belong to the army medical service, and a chemist is attached to each commission, whose special duty it will be to test the purity of articles of food and drink. Never, says the Constantinople *Journal de Médecine*, has there been in Turkey a scientific commission of such importance, the labours of which are destined to render incalculable services to the whole population of the Empire. We shall await the results with curiosity.

PLAINTIFF AND DEFENDANT IN ONE.—A very mixed law-suit, in which a prominent druggist occupies the positions of plaintiff and defendant at the same time, is now engaging the attention of the American courts. The central figure of the case is one Rowland N. Hazard, formerly the proprietor of several popular drug-stores in New York and Newport. In addition to his drug business Mr. Hazard, some twelve years ago, signed as president of a concern known as the American Loan and Trust Company, and he also acquired an interest in the Grand Rapids Hydraulic Company, an engineering business in Michigan, presided over by an individual named Moses R. Crow. As president of this Hydraulic Company Mr. Hazard is alleged to have borrowed large sums from the Loan and Trust Company, to assist the Hydraulic Company to carry out certain engineering works, and it is alleged that he diverted those sums to his private use. In the end Mr. Hazard was forced to resign his presidency of the Trust Company, and his affairs by this time had become so involved that, at the alleged advice of Mr. Crow, he (Hazard) transferred his drug-stores to a company consisting of his creditors, including Mr. Crow. The company was known as the Hazard and Hazard Company, and Mr. Hazard's own services were retained as president of the concern, at a salary of \$8,000 a year. When this company was formed Hazard is said to have owed his wife \$198,000, the capital and interest borrowed from her at various occasions, and sunk in his manifold ventures. In the end Mr. Hazard appears to have become tired of his association with Crow and the others, and they allege that he induced his wife to proceed against the Hazard and Hazard Company for the restitution of the \$198,000, which she claimed to have been induced to lend to her husband on the strength of fraudulent representations made by himself and his associates. Hazard himself denies this, but at any rate Mrs. Hazard brought the suit, and she had already obtained a temporary injunction restraining the shareholders of the Drug Company from disposing of their stock, when she suddenly died, leaving her husband as her sole heir. Apparently Mr. Hazard believes that by going on with the suit, and perhaps recovering the whole or part of the \$198,000 he will stand better financially than he does as president of the Hazard and Hazard Stores, and consequently he is trying hard to continue the suit, in which his success depends upon his capacity of convincing himself of fraudulent practices. Mr. Crow and the other defendants claim that by the death of Mrs. Hazard the suit is "merged," and cannot be prosecuted in its present form, but that appears to be at least a debateable question.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent)

NEW APPOINTMENTS.—Dr. Catois, a licenciate in natural sciences, has been appointed professor of hygiene and therapeutics at the Caen School of Medicine and Pharmacy; and M. Peyrussou, a pharmacist of the first class, becomes, from lecturer, professor of chemistry and toxicology at the like institution in Limoges.

NO CHOLERA IN PARIS.—Two doubtful cases which occurred in the hospitals have been magnified by Bourse speculators into an outbreak of cholera. But autopsies have shown the deaths to be due to other causes, and we are assured the epidemic has not crossed the Spanish frontier. Nevertheless, stocks declined at the Bourse, and fruits and vegetables are offered at invitingly low figures.

GUSTAVE CHANCEL, a chemist of some note, has died at Montpellier. He was known for a treatise on quantitative analysis published in collaboration with Gerhardt, and a

number of memoirs on acetone, propylic alcohol, propylic ethers, nitrated acetones, cane and inverted sugars, and other subjects of organic chemistry. In 1880 he was elected a corresponding member of the Academy of Sciences for the section of chemistry, and at his death was the rector of the Montpellier Academy.

FRENCH-GROWN KINO AND ACACIA GUMS.—Slips and seedlings of the *Acacia dealbata* (silver wattle) and *Eucalyptus viminalis* from Australia have been successfully grown at Antibes near the Mediterranean, and now begin to yield their peculiar gums. Specimens of such kino and acacia, recently examined by Professors Heckel and Schlagdenhaufen, of the Nancy College of Pharmacy, have proved to be in every respect similar to the foreign products, the acacia especially being found entirely soluble, very transparent, and strongly adhesive.

INAUGURATION OF THE GAY LUSSAC STATUE.—On Monday M. Jules Roche, Minister of Commerce, unveiled the statue to Gay Lussac at Limoges. The occasion was celebrated with due civic pomp, M. Roche holding an official reception at the Prefecture. M. Deherin, on behalf of the Academy of Sciences, delivered a speech in which he gave an account of the life and labours of Gay Lussac. Thereafter M. Roche spoke, and the orpheonic societies and pupils of the primary schools performed a cantata composed for the occasion by M. Charreire, the precentor at the cathedral. The statue is the work of M. Aimé Millet.

THE NICOLAS LEBLANC PRIZE.—The Leblanc statue committee have presented to the Paris Chemical Society a balance of 280*l.* remaining on hand, to be used for founding a prize bearing the name of the celebrated chemist. The society council, on accepting the donation, decided that the interest of the sum would be employed to offer a biennial 20*l.* prize, with a Leblanc medal, for the best chemical memoir. The prize may be awarded to anyone, French or foreigner, and member or non-member of the Society, excepting only such as are serving on either the council or the prize committee. The first award will be made next December.

PHARMACISTS' MUTUAL ASSURANCE SOCIETY AGAINST DISPENSING MISTAKES.—The long-mooted project of forming an association of the kind seems to be progressing but slowly. At the last council meeting of the General Association of French pharmacists M. Crinon reported that the circulars sent out to obtain adhesions elicited but a scant number of favourable answers. Nevertheless, the council decided to recommend at the coming general meeting that the mutual society in question be organised with such members as they have to begin with. Voluntary contributions being asked for to form a reserve fund, and set the thing a-going, 7,000*fr.* were in a few minutes secured from the members present.

A SOCIALIST ASSISTANT.—Sigismond Sullam, a chemist's assistant, who is well known among the Socialists of Paris, has been tried at the Palais de Justice on a charge of theft. His employer recently began to wonder why the rapid disappearance of his drugs brought no augmented receipts. Sullam was watched and searched. It was soon found that he had constituted himself into a dispensary for the supply of drugs to the Revolutionists—Italian, Russian, and Greek—of his acquaintance, who, though often unable to provide themselves with a dinner, were able to revel in pills and soothing draughts through the agency of Sullam. Upon him was found letters from Socialists who had derived benefit from the medicines which he sent, and seeking tar and iron pills, ether, laudanum, soothing syrup, iodide of potassium, &c. Sullam was sentenced to a month's imprisonment.

A DISPENSING DOCTOR.—Some time since Dr. P——, of Saint-Eusèbe (Saône-et-Loire) was, on complaint of D——, a pharmacist at Montchanin, a neighbouring town, prosecuted for having dispensed medicines to residents of Montchanin, and having made remarks injurious to complainant's business. The case first came up before the court of Chalon-sur-Saône, when the judge held that, inasmuch as defendant resided in a place sufficiently distant from all pharmacies, he had a legal right to dispense medicaments at his office; that, although he may have sold medicines to residents of Montchanin, as penal statutes must be construed strictly, and since the dispensing was done at defendant's office, he

cannot be said to have violated the law; and lastly, that even if defendant did roally claim his medicines to be cheaper and better than D—'s, such assertions could have no bearing on the issue. The case was in consequence dismissed. And now the Dijon court of appeals has sustained the decision of the lower court.

HOME-RULE FOR THE HIGHER SCHOOLS.—A Bill just introduced before the Senate by the Minister of Public Instruction will greatly modify higher teaching in general, and pharmaceutical schools in particular. In all cities having the four faculties—namely, law, medicine, sciences, and letters—these bodies shall cease to be separate, and shall form, together with the superior school of pharmacy when such exists, a single corporation to be known as the university of the city where situated. Said universities shall remain State institutions, shall be empowered to receive legacies, and shall be governed by a council of their own selection, presided over by a rector appointed by Government, who shall be the executive officer. The council shall consist, besides the appointed president, of the presidents of each faculty and the director of the school of pharmacy, together with two professors of each institution. The council shall elect its own vice-president, fix the courses of lectures, studies, and laboratory practice in the various organisations; establish the programme of examinations in accordance with legal requirements; give advice on the appointment of candidates to vacant chairs; recommend changes and improvement; and have disciplinary supervision over both professors and students. In fine, the council will be given considerable latitude and discretion in managing the affairs of its university. To appreciate the importance of the proposed reform, it should be borne in mind that there is at present but one university in the Republic, that is, the University of France—a strongly centralised body, with its head at Paris, whence almost everything is regulated to the minutest details, from the faculties down to the infant schools. The new measure is one of decentralisation for the schools of pharmacies and faculties. They must remain under Government tutelage, because their diplomas entitle graduates to practise without further examination; but they will acquire considerable independence.

FRAUDS ON THE FRENCH MINERAL-WATER TRADE.—According to the *Temps*, which is generally well informed, it has been discovered that most of the mineral-water now sold in France as bottled from some of the best-known springs in that country is spurious. The discovery is said to be due to the fact that recently several physicians who had prescribed carbonated waters to their patients were struck by the inertness of the waters, and had them analysed. The result of their investigations, coupled with a close observation of the practices of certain manufacturers by the sanitary authorities, revealed the widespread existence of three kinds of adulteration, which have apparently been proceeding unchecked for years. Some of the sophisticators dissolve the salts stated to be present in certain renowned varieties of natural mineral-waters in ordinary Seine water, and fill the compound in bottles which originally contained genuine Vichy or Selters water. It is said that there are in Paris a large number of "mineral-water factories" whose business is simply confined to the process above described. A second mode of adulteration is carried out by certain mineral-water companies themselves, in connivance with their agents. It is a well-known fact that the yield of many French springs declines periodically, while the demand for their waters remains stationary or increases. In such contingencies it is said that the French companies themselves purchase the waters of neighbouring, though less reputed, springs, and bottle them as their own, or send them in bulk to retailers to fill. It has also been discovered that the retailers, in their turn, are apt to buy inferior waters in bulk, and fill them into bottles of better-known springs, to which they affix fraudulent labels. It is also alleged that certain French companies deceive not only their customers for bottled waters, but also the patients who drink the waters at the springs, by supplying them with spurious waters conducted into the original spring by means of underground pipes. There is, in the French Home Office, a department specially charged with the control and inspection of mineral-waters; but that department does not appear to have discharged its duties very efficiently lately. It is now intended to make a clean sweep of the fraudulent traders.

SUPPLY OF DRUGS TO THE ARMY MEDICAL DEPARTMENT.

THE PRESENT CONTRACTORS CRITICISED, AND AN INQUIRY PROMISED.

IN the House of Commons on Saturday, in Committee on the Army Medical Estimates, Mr. ARTHUR O'CONNOR moved, on the vote for 12,000*l.* for medicines, a reduction of 1,800*l.*, or 15 per cent. of the total amount. He said the ground on which he did so was this. The Army Medical Department was entirely dependent upon the Apothecaries' Hall and Messrs. Savory & Moore, not only for the entire supply of the drugs, but also for their quality. The army medical authorities admitted that they never tested the quality of the drugs supplied either to headquarters or regimentally. It seemed to him a very extraordinary thing that this should be so. At Somerset House there was a department for analysis under the Food and Drugs Act, presided over by Mr. Bannister, a gentleman of great capacity. He was constantly analysing all sorts of things for the public department, and his services of course were at the disposal of the army as well as any other department. Not only had they never applied to Mr. Bannister to have the drugs tested, but the representatives of the Army Medical Department were unaware of his existence; at any rate, it never occurred to them to seek assistance such as he could render them. They had been going on from year to year, simply accepting whatever the Apothecaries' Hall or Savory & Moore sent them. Savory & Moore was simply a private firm and a retail firm, and why the Government did not go to wholesale firms he did not know. On the Public Accounts Committee he put to a representative of the Army Medical Department a question as to why they did not go to a wholesale firm, and be served by contract. The answer practically came to this: that the present system worked very well, and that the army medical officers were satisfied. That, from one point of view, was a very reasonable answer. The medical men were concerned with the cure of disease and the treatment of wounds, and that was very much more important than the mere question of analysing the drugs. Yet he submitted that the quality of the drugs was of such importance that a large department, purchasing immense quantities of them for use all over the world, ought to take extreme care that they got the very best that could be obtained. That was not done. That the Apothecaries' Hall furnished good drugs they must take as a matter of course; that Savory & Moore furnished drugs of good quality was also to be accepted, but the other wholesale firms would supply just as good drugs, and Savory & Moore were dependent upon them, because they were not manufacturers themselves. A list of prices of wholesale firms was produced, and the comparative figures struck him as rather extraordinary. He called on one of these wholesale firms, a firm called Evans, Lescher & Webb—somewhere in the City, and asked them if they had ever been invited to tender for army medical stores or drugs. They said "No. We had, a long time ago, some communication, but it ended in nothing." At another meeting of the Public Accounts Committee he asked the representatives of the department whether they had communicated the conditions of supply and the terms of supply to any of the wholesale firms, and they corroborated what he had learned from this City firm. They said, however, "We never communicated to them the conditions of supply because we did not know whether they would be willing to send out small quantities such as the Apothecaries' Hall and Messrs. Savory & Moore send out." He found that that was so, but also that the firms were perfectly willing to distribute drugs in the quantities issued by the Apothecaries' Hall and by Savory & Moore. Then, with regard to trade discount, he was told that in the case of the Apothecaries' Hall and Savory & Moore that it had never been applied for. The wholesale firms were prepared, he was told, to supply at least as good drugs, issue them in the same quantities, and under precisely the same conditions, as the Apothecaries' Hall and Savory & Moore, and allow 15 per cent. discount. Also, with regard to quality, they were prepared to supply samples for testing by Mr. Bannister at Somerset House, or the professor of materia medica at any of the

hospitals. From inquiries, too, he had discovered that Savory & Moore's were nothing but tradesmen, whereas amongst the wholesale firms to whom he had alluded were men who were allied with the Pharmaceutical Society, and who were very distinguished in chemistry. Under those circumstances, he did not see why the public money should be squandered to a very large extent and paid away when there was no necessity for doing so; but he objected also—and he thought the committee would say that it was a reasonable objection—that there should be this system of monopoly. Why should not wholesale manufacturers be invited to contract for the supply of army drugs? Under the present circumstances he thought there was no justification for the expenditure, at any rate, of 1,800*l.*, and he moved the reduction of the vote by that amount.

Mr. BRODRICK (Financial Secretary to the Treasury), in reply, said he knew the hon. gentleman had taken a great interest in this subject, and there was no doubt some difference in the practice of the War Office and the Admiralty in getting medicines. Medicines had to be delivered in a totally different way for the War Office to what they had for the Admiralty. The Admiralty received them in large quantities, and put them on board ship in that form. The War Office demands were for a great number of different stations, which required an immense amount of dispensing and packing up in small packages. It was impossible for the War Office to receive medicines in the same way as the Admiralty, say, by storing them at Woolwich or somewhere else, and distributing them to the army stations. The hon. member had pointed out that after all the first thing to consider was that the high quality of the medicines should be maintained. The hon. member would recollect that in times past there had been in various campaigns considerable criticism of the quality of the medicines prepared, and the War Office, in taking certain particular firms for their supplies, had no doubt considered that it was more important to have absolutely reliable supplies than to accept the lowest price at which they could obtain them. The hon. member brought the subject before the Public Accounts Committee, and the report of that committee stated that after taking the evidence they had great difficulty in comparing the two systems of the War Office and the Admiralty. They recognised that the question had been under consideration by the War Office, but they also felt that great importance attached to the maintenance of the high quality of the medicines supplied to the army. He thought, considering that this point was brought very carefully before them, and that they looked into it minutely, the report showed, at all events, that they were not prepared to take any steps to recommend the House of Commons to make any departure. As regarded competition, it must be remembered that prices were constantly changing. The department took independent means of revising the prices of the medicines supplied. If they found they were being supplied beyond the market price, they would call for a fresh supply, and open it to competition. He hoped the committee would not press them to abandon the present system.

Mr. ARTHUR O'CONNOR characterised the report of the Public Accounts Committee as a very tame and impotent conclusion. The evidence before the Committee was of the strongest possible description. It was admitted that trade discount was not obtained, it was also admitted that practically no attempt was made to ascertain whether other firms could not supply equally good drugs at lower prices; but the whole evidence was in favour of a practical inquiry at any rate being made by the War Office authorities. When the representative of the Army Medical Department was asked by himself whether he would cause some inquiry to be made, he said the department was not unwilling to make inquiries of independent firms as to their readiness to supply drugs, but before he made the application he should have to get the permission of the Secretary of State for War. He presumed that, having left the committee-room, he thought no more about it, and he presumed that permission had not been asked for. (Mr. Brodrick: No.) It was, then, merely a perfunctory answer, and no more was thought about it, and in the meantime the country was put to this unnecessary expense. The only reason put forward was the importance of getting pure drugs. Everybody knew that, but he challenged the hon. member (Mr. Brodrick) to say for one

moment that either the Apothecaries' Hall or Messrs. Savory & Moore supplied better drugs than a dozen manufacturers and wholesale chemists in the City of London. Why should he suggest that Savory & Moore supplied drugs which could be depended upon more than the firms which he had mentioned? He could not for a moment pretend to do so. The tests which were open to the Government to use could be used with regard to the drugs submitted. There was absolutely no justification for the monopoly. This talk about pure drugs was all moonshine, and the money of the country was being wasted. He was sorry that the Government had not undertaken that they would cause inquiry to be made to give other firms an opportunity of stating their readiness to comply with the conditions laid down. Other firms were ready to distribute the medicines in the same way as they were now distributed by Savory & Moore. For the last 35 years the system had been absolutely unchanged.

Mr. STANHOPE (Secretary of State for War): I am quite willing to undertake to make investigations to see whether or not we can get from other firms goods equal to those at present supplied. I will undertake that before next year we will look into the matter and see whether or not we can, with proper safeguard to the public service, obtain the drugs elsewhere at lower prices.

Mr. O'CONNOR upon this withdrew his amendment, and the vote was agreed to.

Trade Notes.

SPRATTS PATENT (LIMITED) have declared a dividend of 10 per cent. per annum for the past half-year.

WE have received May, Roberts & Co.'s price-list for 1890. It is illustrated, and very comprehensive.

THE ANGLO-AMERICAN OIL COMPANY (LIMITED) have removed from 16 St. Helen's Place, Bishopsgate, to Dock House, Billiter Street, E.C.

THE DEADLY MANZANILLO.—In our last issue we gave an abstract of an American consular report on the poisonous manzanillo, a fruit growing in Venezuela, South America. Mr. E. L. Armbricht, of 2 Duke Street, W., informs us that the tree is known botanically as *Hippomane Mancinella*, and that he possesses specimens of the fruit, leaves, and juice.

MESSRS. F. NEWBERRY & SONS send us a copy of William R. Warner's "Therapeutic Handy Reference Book" for physicians. This contains, in addition to hints on weights and measures, prescription writing, a posological table, and other well-collated information useful for physicians, a very complete list of Warner's sugar-coated pills, and a medical formulary arranged alphabetically according to the nature of the diseases. The book is neatly got up, and is bound in cloth.

THE DIRECTORS OF BRUNNER, MOND & CO. (LIMITED) have issued their report for the half-year ending June 30. It shows a balance of 129,692*l.*, which, with the amount brought forward, makes a total of 142,997*l.* The directors propose to deal with the balance as follows:—Dividends on the preference capital at 7 per cent. per annum, 12,035*l.*, and on the ordinary at 30 per cent. per annum, 88,125*l.*; amount to be written off patent accounts, 2,500*l.*; to be placed to suspense account, 20,000*l.*; leaving a balance to be carried forward of 20,337*l.*

BOVININE.—The J. P. Bush Manufacturing Company, whose London depot is at 32 Snow Hill, E.C., have sent us a small sample of Bush's fluid food, which is best known as "Bovinine." This is a thickish fluid prepared from raw beef, containing comparatively little unassimilable matter, but is very rich in albuminoids. We have not attempted to estimate the quantity of the latter, but we may say that the fluid coagulates on heating. It is free from raw-beef odour and taste—indeed, it is pleasant to the palate, and may be given with milk or other fluids. It is neatly put up.

HELENIN, the active principle of elecampane root, according to Marpmann, prevents the development of tuberculosis.

Personalities.

MR. T. HOWELL WILLIAMS, F.C.S., member of the London County Council, has printed in pamphlet form an open letter to Mr. Walter Wren, of the same council, on the abolition of London fog. In this pamphlet Mr. Williams has brought together in a very readable manner arguments and facts in favour of the heating and lighting of London by means of pipe lines.

THE EMPRESS OF GERMANY has been to see Stanley's "Congo medicine-chest." Messrs. Burroughs, Wellcome & Co. had it on show at the Berlin International Medical Congress, and last Saturday when the Empress was taking a walk round the exhibition she was attracted by the weather-beaten relic of Stanley's famous march. She, in true feminine spirit, asked all sorts of questions about it, and inspected the tahlolds remaining in the chest, adding a few sentences in admiration of the remarkable compactness and portability of the medicines.

MR. ALBERT RICHARD AWBERY, chemist and druggist, Henley-on-Thames, is sole proprietor, printer, and publisher of the *Henley Advertiser*, and, as he has got opposition in this department by a paper subsidised by the lord of the manor, he announces that in future his own paper will be perfectly neutral, and will be styled "*The Henley Advertiser*, The Independent Organ for Henley and District." It will be doubled in size—to forty-eight printed columns—and the proprietor appeals to his fellow-tradesmen for support in the shape of advertisements, which will be inserted at half-price. This is Mr. Awbery's way of "casting off the 'unpaid' trammels of the Conservative party" and defying the lord of the manor.

TYRER TESTIMONIAL FUND.—A committee, with Mr. David Howard as chairman, and Mr. C. C. Hutchinson as hon. sec., has been formed for the purpose of making some recognition of the services which Mr. Thomas Tyrer has rendered for a considerable period to the chemical industries generally. Mr. Tyrer took a leading part in the formation of the Society of Chemical Industry in 1881, and from that time up to the present has discharged the duties of secretary to the London section in a manner which has won the approbation of all. In other directions Mr. Tyrer's services to chemical industries have been equally energetic and valuable, and it was mainly owing to his efforts that the Board of Inland Revenue lately granted a drawback upon the spirit exported in medicinal preparations, which is a valuable boon to practical pharmacy. Mr. David Howard, City Mills, Stratford, E., is receiving subscriptions, which may be one guinea or a less amount. Amongst the members of the committee are Sir F. A. Ahel, C.B., F.R.S., A. H. Allen, Dr. J. Bell, C.B., F.R.S., M. Cartelghe, Professor J. Dewar, F.R.S., Sir Henry Rosecoe, M.P., V.P.R.S., E. C. C. Stanford, J. C. Stevenson, M.P., Sir John Turney, and C. Umney.

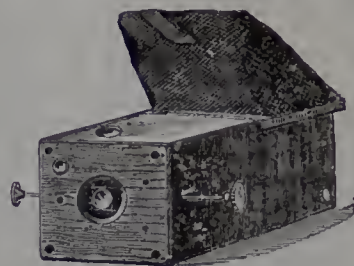
Notes of Novelities.

PHOTOPEL.

WE mentioned in our report of the British Medical Association at Birmingham that Mr. H. W. Jones, F.C.S., chemist to Messrs. Wyleys & Co., of Coventry, had invented a new compound photographic developer, which he sends out in pellet form under the above name. Each pellet makes four ounces of developing solution with a sufficiency of caustic potash. The solution obtained is one of the most cleanly that we have ever worked with, and at the same time it provides excellent negatives, in which the detail is brought out with wonderful accuracy. Moreover, the development is very easily controlled, and the use of the alum bath is unnecessary.

HAND CAMERA.

MESSRS. F. DARTON & Co., of St. John Street, West Smithfield, have for some time been offering the trade a portable

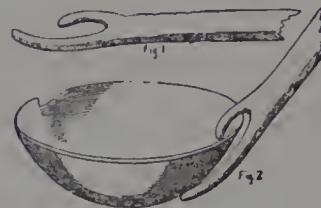


hand-camera, which we figure here. This camera carries twelve plates, $3\frac{1}{2}$ by $2\frac{3}{4}$ in., is self-focussing, takes instantaneous and time pictures, and is provided with a good viewfinder. We have had one in use for a month or two, and our experience

is altogether in its favour. It gives good, though small, pictures, is very easily worked, and its lightness makes it specially adaptable for tourists by road, river, or rail. The camera should be a good line for chemists at this season.

LABORATORY NOVELTIES.

THE *Chem. Ztg.* gives particulars of two simple novelties which may be useful in laboratory work. The first is a holder for porcelain dishes, which will obviate the danger of handling dishes containing hot substances. It is not stated



what the material is of which the holder is made, but we should think it would be of porcelain. Fig. 1 illustrates the holder in its natural size, while Fig. 2 is intended to illustrate its mode of use.

The next novelty is a glass filter, the idea for which is taken from Mohr's "*Lehrbuch der Titrimethoden*." The apparatus consists of a simple glass tube, about ten to twelve inches in length, and about one-fifth of an inch in width, carefully smoothed at one end. A small square of filtering paper, about half an inch in diameter, moistened with a drop of water, is pressed to the smoothed end of the tube and placed on the surface of the liquid from which it is desired to obtain a clear filtrate. By suction with the mouth at the other end of the tube, the liquid is then drawn into the latter, the impurities of course being kept back by the small square of filtering-paper. When the tube is nearly filled, the filtering paper is shaken off with the finger, and the clear filtrate remains in the tube. It is said that this simple method has been found exceptionally useful in many operations, especially in the volumetric analysis of sulphuric acid, in which it replaces the complicated apparatus of Wilberstein.

THE KINDS OF FUSTIC most frequently offered in the European market are Tampico fustic, Tuspan fustic, yellow Pernambuco wood, East India fustic, San Domingo fustic (which denomination applies to all yellow woods from the West Indies), and Cuba fustic. All these differ greatly from each other in their contents of dyestuff, the Cuba, San Domingo, and Tampico kinds being considered the best. The so-called East India fustic of commerce is very poor in extract and scarcely pays for working, and is principally used for fine cabinet-work.

INTERNATIONAL MEDICAL CONGRESS.

(From our Berlin Correspondent.)

THE PHARMACOLOGICAL SECTION.

THIS section is the one which is of most interest to chemists, and at the outset I may note that this is the first time in the history of the Congress that there has been a section devoted solely to pharmacological subjects. It was gratifying, therefore, to observe that the principal living pharmacologists were amongst those who attended. More than half of the company consisted of pharmacists, who received exactly the same attention as was given to medical men. Each member of the section received a little book containing the titles, &c., of all the papers by German pharmacologists which have been published during the last twenty-four years. The work was presented by Liebreich, Boehm, and Binz, and is very useful for reference. Professor Poehl, of St. Petersburg, was the first to speak, his paper being on

SPERMIN.

This is a substance the active principle of which is very probably ethylenimine. Professor Poehl spoke of the preparation of spermin, and said that he believes that it has the virtue of increasing the power of living. Kohert and Schmiedeberg both questioned the activity and action of the substance. But the most interesting point to chemists is the fact that both musk and castoreum contain a quantity of spermin—musk only in traces, castoreum more.

Following this, several communications by Professor Kohert, of Dorpat, proved of great interest. We have to thank this investigator for many most valuable researches, and we in Germany would be pleased if he should soon become the professor of a German university, and leave his Russo-German position. In one of his papers Kohert reported that he had found that

URANIUM AND ITS SALTS

are very poisonous substances; so also is wolfram, which must be just as carefully handled as arsenic. A French paper was read by M. Petresco, of Bucharest, who recommended specially the inhalation of guaiacol, terebene, and eucalyptol in the treatment of bronchial affections, in a similar way to the well-known ammonium-chloride inhalers, dry inhalers, &c. The question as to whether

MALE-FERN EXTRACT

is poisonous or not has often been discussed, and here it was Poulsson and Kohert who specially gave their opinion on the subject. Kohert pointed out that the extract of *Filix Wulmarensis* is very active, being about ten times stronger than the German and twenty times stronger than the French extracts of male fern.

Amongst other important papers was that of Plugge on andromedotoxin. Mr. E. M. Holmes some time ago, in speaking of the poisonous honey of Trebizond, raised the point as to whether this is due to the honey being collected from flowers of rhododendron species. Plugge now reports that he has obtained the very poisonous base andromedotoxin from all the Ericaceæ except erica, calluna, and gaultheria. Brongeeest next spoke on *Caltha palustris*, which he analysed and found to contain nothing more active than potassium-chloride. Kohert somewhat corrected this statement, as there is no doubt that the plant contains a volatile alkaloid very similar to nicotine, which might have been destroyed in the working.

Professor Binz, of Bonn, spoke on

FLUOROFORM AND BROMOFORM.

He obtained very good results in preparing fluoroform by adding some chloroform during the action of silver fluoride on iodoform, all precautions being taken to avoid traces of chloroform being mixed with the fluoroform during distillation. Fluoroform is very volatile, and has a similar physiological action to chloroform.

Professor Kohert read a paper on

STOMACHICS.

All the various bitters are believed to be active, but the proofs of their action are not very strong. He said that

cetrarin has decided action on the bowels, thus being of real value, especially in cases of chlorosis and constipation. As an appetiser experiments were made by a pupil of Kohert's, a Mr. Ramm, who also experimented, with similar results, on absinthin, quassin, columbin and exostemmin.

Various other papers were read, but they were mostly of very little interest to pharmacists: many, indeed, were of trifling value to anybody. Many papers could not in any way be properly read and discussed, as the time was extremely limited, and the chairman was continually reminding the speakers, "You have only five minutes more—three minutes more"; and often there remained only three minutes when the speaker finished with the introduction.

THE CHLOROFORM QUESTION

was, of course, also largely dealt with, and certainly Lauder Brunton took a great deal of trouble with it; but the results do not come to much. Brunton described his Hyderabad researches, and all Germans agreed that everything that Brunton said is true and always recognised as such in Germany—namely, that chloroform can be administered, with the necessary precaution, as safely and with as much efficacy as any other anæsthetic. The principal matter which interested chemists was the

DISCUSSION ON PHARMACOPŒIAS,

which, after much delay, came off on Friday morning. Dr. Langgaard was the first to speak, and the gist of his communication was that he thinks an International Pharmacopœia is quite impossible, but that on certain points an agreement may be made regarding the strengths of various preparations. As to which remedies should be included in the Pharmacopœia, and what rules should be adopted for guidance in the selection of remedies, he spoke at considerable length. He is of opinion that there exists no definite proof as to what is, and what is not, a good remedy. He then went fully into a criticism of the proposed Addendum of the British Pharmacopœia, and compared it with the new German Pharmacopœia, and proved thus how far the opinions differ regarding what is to be included in Pharmacopœias. He then proceeded to say that first of all Pharmacopœias should not include such preparations as are easily decomposed; second, that the inclusion of preparations which are patented and registered cannot be prevented, as nowadays each new remedy will, if possible, be patented, and it would almost follow that a time would come when nothing new could be added to Pharmacopœias, as everything is patented. He also specially advocated to have in all countries certain preparations standardised where possible—notably extracts, tinctures, and the like, which contain alkaloids or other potent active principles. Under this rule belladonna, colchicum, opium, and nuxvomica would come. Following Langgaard, Dr. Hirsch, the author of the "Universal Pharmacopœia," read a very elaborate paper, much of which was neither new nor to the point, as he went greatly into details regarding tests and so forth, and all this could not possibly be discussed in so short a time. The changes which the compilers of Pharmacopœias make, without any proper reason, is best shown by a table, in which Hirsch gives the percentage of the various acids in the editions of the Prussian and German Pharmacopœias:—

Pharmacopœias	Acetic Acid	Phosphoric Acid	Nitric Acid	Hydrochloric Acid	Sulphuric Acid
Ph. Boruss. ed. 5.	22.3-33.5	21.4-22.8	31.5-33.25	20.5-24.5	16.415
Ph. Boruss. ed. 6.	29.4	22.1	32.2	24.35	16.415
Ph. Boruss. ed. 7.	29	22.1	29.12	25	16.415
Ph. Germ. ed. 1.	30	20	30	25	16.415
Ph. Germ. ed. 2.	30	20	30	25	15.67-16.17
Ph. Germ. ed. 3.	30	25	25	25	15.67-16.17

Dr. Hirsch continued to give such details, and hoped that as much as possible would be done to obtain at least some agreement in those remedies which are most universally used in all the countries.

The discussion was then opened by Dr. Link, one of the chief military pharmacists of Berlin, after special pressure from the chemists present to not further delay the question. Dr. Link spoke on behalf of Professor Vulpus, of Heidelberg, who desires uniformity in such preparations as are strong in action, and further, that preparations kept during two years in at least a quarter of all chemists' shops should be included in the new Pharmacopœia.

Professor Kobert hoped that manufacturers would be asked to assist in working out formulæ for preparations, as often the formulæ given do not work when tried on a large scale. Dr. Hirsch advocated that methods of testing for purity should be as simple as possible, so that any chemist may perform them. Mr. H. Helbing (London) pointed out that it would be important to have at least the acids in all countries of one strength, and the tinctures and extracts, wherever possible, standardised with reference to the acting principle, this being a matter of the greatest importance in international towns such as London. He also thought it would be wise to have from time to time similar Addenda to the one now proposed by the English authorities. Such Addenda might contain properly examined new remedies, and new or improved purity tests for preparations already included in the Pharmacopœia. For instance, the test for cocaine in the B.P. by no means comes up to the requirements which the physician has now a right to demand for such an article, and he would have a more stringent test made official. Senator Croques, of Brussels, spoke up for the International Pharmacopœia, while Dr. Brongest (Holland) did not think an International Pharmacopœia possible, but, like Mr. Helbing, he desired an agreement with reference to certain galenical and chemical preparations.

Dr. Schweissinger, of Dresden, who is a practical pharmacist, and has now the charge of the analytical laboratory of the well-known Dr. Geissler, approved of this idea, and thought standardising was not too troublesome to the chemist, as many preparations can now in two hours be examined for the amount of alkaloid. Dr. Paschkis (Vienna) also went strongly for standardisation, whether the methods are easy or difficult.

Dr. C. Schacht (Berlin) did not think it necessary to have standardised galenical preparations, as of many preparations it is not yet known which is the active principle. It was most curious to hear from Dr. Schacht, who is a member of the Pharmacopœia Commission, and connected with all the official commissions, "that it does not matter at all whether a preparation, say, tinct. strych., contains a little more or less active principle and he thinks it impossible to have standards for all such preparations." But Dr. Schweissinger replied to him most effectively, pointing out, with the full sympathy of all present, that we live now in a time when we can at least expect from a pharmacist as much scientific exactness as possible.

Dr. Schacht tried to smooth the matter away with the remark about the collapse of the International Pharmaceutical Congress in Milan.

Professor Liebreich and Dr. Lewin also spoke on the subject, but nothing fresh transpired, and after one hour's discussion, the section, although agreeing that it would be of the greatest importance that such preparations as acids, tinctures and extracts should be standardised, refreshed themselves with a glass of beer as a "Frühschoppen," which they enjoyed very much, although they were not much wiser about the International Pharmacopœia than a fortnight ago.

The Anglo-American dinner, which I spoke of, was given at the Kaiserhof Hotel on Friday. Dr. J. V. Shoemaker, of Philadelphia, occupied the chair, and fully sixty medical men were present, including Dr. Landolt, of Paris; Professors Panwart and Goodman, Philadelphia, Dr. William Murrell (London), Professor Leach (Manchester), and Dr. Parkes (U.S.A.); the editor of the German *Pharm. Zeitung*, Mr. S. M. Burroughs, Mr. Evans (Philadelphia), and Mr. H. Helbing.

Obituary.

V. BARTHENAU.—Professor Ludwig Barth von Barthenau, director of the chemical laboratory of the Vienna University, died in Vienna on the 3rd inst., from heart disease, after a long and painful illness, at the age of 51. The deceased scientist was a native of Tyrol, and studied chemistry under Liebig and Pettenkofer at the University of Munich. He was appointed Professor of Chemistry in Vienna in 1876, and was a frequent contributor to the German chemical press. In addition to his scientific renown, Professor v. Barthenau was a noted athlete and Alpine climber. He served his country as a soldier in the campaigns of 1859 against the Sardinians and French, and again in 1866, during the war with Italy and Prussia.

FRENCH.—Mr. Clayton French, senior member and founder of the extensive wholesale drug firm of French, Richards & Co., of Philadelphia, died, on July 27, at his country house in Pennsylvania, aged 66 years. Mr. French traced his descent back in direct line to Thomas French, who came over with the Pilgrim Fathers in the seventeenth century, and was one of the proprietors of West New Jersey, owning by grant from the king the one-ninth of one-sixteenth of that State. Mr. Clayton French had been in the drug trade on his own account ever since he was 19 years of age.

LINDSAY.—On August 1, Mr. John Lindsay, chemist and druggist, Biggar, Lanarkshire. Aged 52.

SCHIEFFELIN.—Mr. Henry Maunsell Schieffelin, of the firm of wholesale druggists, New York, died from fever on July 25, at Alexandria, in Egypt, where he had gone in the autumn of last year. Mr. Schieffelin was born in New York in 1808. After finishing his education, he entered his father's drug store; but a few years later, in 1828, he and his cousin, Samuel Bradhurst, formed the separate drug firm of Bradhurst & Schieffelin, the precursors of the present house of W. H. Schieffelin & Co. Mr. Schieffelin took an active interest in the negro emancipation movement and in the colonisation of Liberia by liberated slaves. He was the first president of the first telegraph company between New York and Boston. He leaves a widow and two daughters. By his will Mr. Schieffelin has left \$20,000 to the American Sunday School Union.

SHARPE.—On July 25, Mr. George Young Sharpe, pharmaceutical chemist, Lansdowne Road, Holland Park, London. Aged 75.

WANTS IN A WHOLESALE FIRM.

WANTED, a Traveller free to admit

That the goods he is handling are second to none;

That anything else but his own ready wit

Helped to get him the meat, and leave others the bone.

Wanted, a buyer disposed to believe

That he might make a purchase a tyro would scorn;

That the reason his too bulky stock makes him grieve

Is because someone rose before him in the morn.

Wanted, a junior who will not contend

That he is the man to put everyone right;

Who can't understand how matters will end

If the duffers who rule are not soon put to flight.

Wanted, a clerk who's not given to boast

That he is the man most important of all;

That without him they all would be had upon toast,

And the business assuredly go to the wall.

Wanted, a house where such men can be found:

Alas! 'tis a task that bewilders the brain.

Still, by ridicule folly oft falls to the ground,

And my rhyming may then be not wholly in vain.

R. W. C. (110/54.)

THE NEW GERMAN PHARMACOPŒIA.

HAVING referred very fully in a recent issue (THE CHEMIST AND DRUGGIST, June 21, page 830) to the more important alterations in the third edition of the German Pharmacopœia, we propose now to discuss briefly what there is new in the book and likely to be of general interest.

The responsibility which the compilers of the last edition of this Pharmacopœia threw upon the Government of producing a Latin version of the German MS. which the compilers produced appears to have been too great for the Government, for in the present instance they have contented themselves with the German version only. Last time, it will be remembered, a German and a Latin version were published simultaneously. Contrary to anticipation, the old title of the book has gone, and in its place we have the thoroughly Teutonic one *Arzneibuch für das Deutsche Reich* (Medicine Book for the German Empire).

The Pharmacopœia gives general directions for the preparation of a dozen groups of articles, and presumably these are now added to the stock which the apotheker must be capable of preparing himself. They are as follows:—

Capsulæ—Kapseln.

These are said to be made of starch and gelatine, the former, of course, being the well-known cachets. They are said to be prepared from sheets composed of wheaten flour and wheat starch, by pressure in a suitable apparatus. The gelatine capsules are made from gelatine without the addition of glycerine and sugar, and may be either the ordinary form of capsule made extemporaneously or simple gelatine capsules provided with a lid, but the Pharmacopœia gives no manipulative directions for their manufacture.

Electuaria.—Salbvergen.

In addition to the simple directions for the preparation of senna electuary, the Pharmacopœia states how electuaries generally should be made. The directions are simply to the effect that the solid ingredients of electuaries must be in very fine powder, and should be well mixed together before the other liquid or pasty ingredients are incorporated with them.

Emplastra.—Pflaster.

Plasters are said to be in tablets, sticks, or lumps, and to have a basis of oil, resin, wax, or fat, with other bodies. It is stated that the method of preparing them is to melt first those substances which are melted with greater difficulty, then to add the easier melting bodies, and if the plaster is to contain any solid substance which cannot be melted, this should be added in a perfectly dry and well-powdered form to the half-cool mass, mixing thoroughly. As to spreading plasters, it is stated that the layer of plaster should not exceed 1 mm. in thickness.

Extracta Fluida.—Flüidextrakte.

General directions are given for the preparation of four extracts, namely, condurango, frangula, hydrastis, and secale cornutum. Fluid extracts, it is said, are made in such a way that the weight of the extract shall represent an equivalent weight of the dried and powdered drug. This definition differs entirely from that which is accepted in the United States and in this country. 1 cc. of the United States fluid extracts is equivalent to 1 gramme of the drug, and with us a fluid ounce of the extract is equal to an ounce of the solid drug. In Germany, where all liquids are weighed, the American and English standards would evidently be unsuitable, but it should be kept in mind that the German standard is practically an innovation, and that the fluid extracts of the German Pharmacopœia should not be used in this country for the equivalent British preparations. There are two ways of preparing the fluid extracts; in the second the menstruum contains glycerine, and provision is made for introducing the whole of the glycerine into the percolate. As already stated, the method of percolation is detailed with great care. 100 parts of the powdered drug

are directed to be mixed with the menstruum, until it can take up no more; it is kept for two or three hours in a well-closed vessel. This mixture is then packed carefully in a percolator, the greater part of which it ought to fill, then more of the menstruum is poured on, until the drug is quite covered by it. The percolator is then covered and set aside for twenty-four hours, the temperature being fixed between 15° and 20° Centigrade. After this it is allowed to percolate at the rate of 15 to 20 drops per minute. Percolation is continued until 85 parts have been collected; this is set aside, and the percolation is again continued with more of the menstruum, until the drug is exhausted; then this second percolate is evaporated (the spirit being recovered by distillation if necessary), to 15 parts, so that when dissolved in the first percolate it should give 100 parts, by weight, of fluid extract. In fluid extracts containing glycerine the first menstruum used is a mixture of spirit, water, and glycerine; in the second, spirit and water only are used. The directions for percolating and evaporating are in this case practically the same as in the former.

Granula—Körner.

Granules are to weigh .05 gramme, and are made from a mixture of four parts of milk sugar and one part of gum arabic, to which is added the solution of the medicament in ether, spirit, or water, the mixture to be made into a mass with syrup to which 10 per cent. of glycerine has been added, and the mass divided into round granules and dried. In exceptional cases small granules of the above composition may be medicated by shaking up with the solution of the active substance.

Linimenta—Linimente.

Liniments are not new to the German Pharmacopœia, but a definition is now prefixed to the three which stand under this heading. It is said that as a rule they contain a fatty oil or a soap, their consistence being midway between a true salve and a thickish fatty oil; opodeldoc is quoted as an example. Liniments must be uniform mixtures.

Pastilli—Pastillen.

Directions for the preparation of pastilles are given, but no examples. There is a want of precision here. It is said that they are made from substances in a powdered condition by the cold process, or from a warm mass, pressure being applied in both cases, or they may be brought into the proper form by means of some binding material. In the latter case the binding materials used are, as a rule, sugar, gum, or tragacanth with water, a little spirit being used for massing. Pastilles are said to be disc-shaped, and, when not otherwise ordered, to be one gramme in weight.

Pilulæ—Pillen.

There are no new pills in the Pharmacopœia, but directions are given for the preparation of pills generally. The excipients (Bindemittel) generally used are such as: (1) a mixture of equal parts of powdered liquorice and liquorice-juice with or without the addition of a mixture of one part of glycerine and two parts of water, and the excipient should, when possible, not exceed 0.1 gramme for the dry pill; (2) organic substances, such as silver nitrate, are to be massed with white clay (kaolin or bolus alba); (3) balsams, creosote, ethereal and fatty oils are to be melted with one or two parts of yellow wax so as to bring them to pill mass consistency. When not otherwise directed, pills are to be rolled in lycopodium; as a varnish, a solution of tolu balsam is to be used; for keratinising, a solution of keratin in ammonia or acetic acid, and for silvering, the leaf is used.

Rotulæ Sacchari—Zuckerplätzchen.

Pastillettes are made by mixing powdered sugar with a little water and heating it sufficiently to form a sort of half-solution, but not far enough to make a transparent mass. The mass is afterwards formed into balls. In this way rotulæ menthæ piperitæ are formed from 200 parts of the saccharine mass, one part of oil of peppermint, and two parts of spirit, to dissolve the oil.

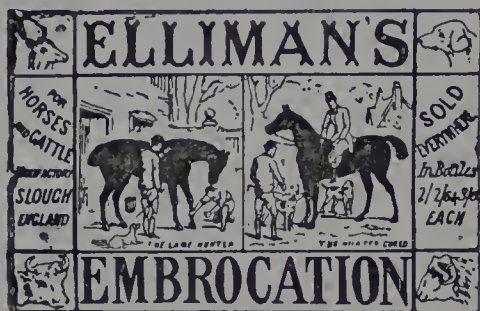
In our next article we shall refer to other pharmacy matters in the Pharmacopœia.

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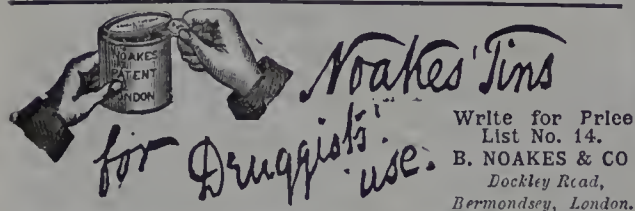
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EDITORIAL NOTES.

THE IRISH PHARMACY BILL.

EARLY on Wednesday morning this Bill came before the
House of Commons, the Lords' amendments being the only
thing interrupting the final stages before enactment. By the
time the Bill came on the House had become wearied of
Supply, and seemed unfit for anything else; but it is never
tired of Irish matters, apparently, and after it had granted
Mr. Balfour leave to bring in a Bill in connection with
certain railways in Ireland, Mr. Sexton, who has done such
excellent work in regard to the Pharmacy Bill, had some-
thing to say regarding it. At the outset he said that the
Lords' amendments had considerably altered the Bill, but
in the circumstances the 3,000 chemists and druggists

in Ireland had no course left but to ask him to request the House to agree to the amendments. He proposed, however, that an alteration should be made in the clause requiring an examination of persons already in the trade. This clause, it will be remembered, states that any person who has gone into business as a principal since the passing of the principal Act, and who desires to be registered, "shall be examined with respect to his knowledge of reading and writing, the English language, elementary arithmetic, and the appearances of poisons, drugs, and chemicals, in common use." What Mr. Sexton complained about was that the interpolation of the words "English language" was unnecessary, because it was evidently intended that the examination should be in reading and writing, followed by an examination in elementary arithmetic. He therefore moved that the words "English language" be struck out. It seemed that the Irish Attorney-General had admitted that the words "English language" were not needed, but as Mr. Madden was not present, Mr. Sexton asked the English Solicitor-General to agree to his motion. Sir Edward Clarke evidently knew little about the matter, for he replied that, looking at the clause for the first time, it seemed to him that there was no objection to the omission. Accordingly the words "English language" were struck out of the clause, and the other amendments agreed to.

On Thursday evening the Bill, as thus amended, came before the House of Lords, and the amendment was agreed to without discussion, so that nothing remains but the Queen's consent to make the Act operative.

Thus the long fight between the two sections of the trade in Ireland has come to an end, and a new era has set in for Irish pharmacy. The Irish Pharmaceutical Council will have to look alive in regard to the matter of registration. The sixth clause provides that those who were in business before the 1875 Act passed may be registered at any time within a year after the passing of the Amendment Act. Then the work of examining and registering other principals and assistants begins forthwith, and requires examiners, appointed by the Lord Lieutenant in the former case, and by the Council in the latter. It is probable that the Lord Lieutenant will entrust his part of the duty to the Council, so that the formulation of examination schedules is a matter which should have the earliest attention.

MODERNISING PHARMACY.

THE International Medical Congress is over, and its organisers are now free to count up the cost and to gather together the ears of wheat which have been left in the field. It was more of a harvest-field than a battle-field, for there seem to have been few, if any, notes of discord heard in an assemblage of over 5,000 medical men, speaking all the tongues of the civilised world with fluency, and the official languages with varying difficulty. This alone is something to achieve, but all the reports go to show that there has been really enduring and useful work done. The great drawback to all meetings of this character is that there is too much to do in a limited time, that tongues slacken, and "cranks" air their "fads" to the disgust of those who cannot be ranked as enthusiasts. The graphic report which our Berlin correspondent sends of the proceedings of the Pharmacological Section shows that it was not free from this taint; but in spite of some waste of time in this manner, the section succeeded in putting in a good case for advanced pharmacopœial pharmacy. The time was opportune. A few days before, the third edition of the German Pharmacopœia had seen the light, and as an indication of the present condition of pharmacy it is disappointing.

Although it is seven years since the last Pharmacopœia

was published, there has in the interval been little improvement made in its methods for manufacturing galenical preparations. Percolation is for the first time recognised in the Pharmacopœia, and that only for preparing four fluid extracts. A large proportion of the tinctures are "1 in 10" preparations, and on that account their preparation by this method may be unnecessary; but there are a large number of solid extracts, prepared by methods of infusion and maceration, which would be materially improved if the processes were modernised. The fact seems to be, as far as the Pharmacopœia indicates, that the German pharmacist still labours to a large extent in the past; and were it not that every apotheker is a manufacturer of galenical preparations in the true sense of the term, we might question whether the German pharmacist is not more of a chemist than a pharmacist. But the discussion on Pharmacopœias in the Pharmacological Section of the Congress, happily, alters to some extent the opinion which we are apt to form of German pharmacy. There is such a rush in "the Fatherland" to synthetic remedies, and chemistry has reached such a point of development in that country, that it almost seems as if old medicines, and especially vegetable products and their preparations, were to be cast aside. Indeed, we cannot help thinking that the backwardness of the German Pharmacopœia is to some extent the cause of this. Instead of encouraging the development of galenical pharmacy by modernising pharmaceutical processes, and thereby placing more reliable preparations at the disposal of physicians, the compilers of the Pharmacopœia have allowed the methods of last century to remain official. In the meantime, therapeutic development has been mainly on the chemical side; new inorganic salts have been brought into use, and organic research has produced a myriad of complex substances, many of which have taken a secure place in exact therapeutics. What the ultimate effect of this movement may be it is difficult to judge: as one speaker pointed out in the congress discussion, the time may come when all new remedies will be patented articles. That is more likely to happen in Germany than in England; for while there is comparatively little improvement in the preparations of potent drugs in the former country, we have set about making such preparations as uniform as they possibly can be made. Herein lies the surety of the pharmacist's stability; it is the opiums and belladonnas of medicine—the favourites of our forefathers—which are the backbone of therapeutics; faith in them never wavers, and, provided they are of good quality, they rarely disappoint prescribers. It behoves pharmacists to give this department of their work special care, since it is the one which demands most fully the exercise of their professional skill and knowledge. German pharmacists appear to be beginning at last to recognise that they have been negligent in the past of their duty in this respect, and the movement to have all potent pharmaceutical preparations standardised is a good omen. We are glad to notice from what was said at the Congress that it is the Pharmacopœia Commission which is wanting in spirit regarding this important question, and not pharmacists generally. Dr. Carl Schacht, one of the members of the committee, took part in the discussion, and confessed his inappreciation of the necessity for standardisation, this confession sufficiently accounting for the absence of exactness in regard to the preparations of opium, cinchona, and the like. It is felt, however, that such preparations are as deserving of precision as, say, the latest synthetic product, and we trust, now that the matter has fairly started in Germany, that it will be kept under discussion until the principle of galenical exactitude is generally agreed to. It is in this direction that

international uniformity in the strengths of potent preparations must go. The prospect of an International Pharmacopœia is long dead; and we are glad of it. All that is wanted is an occasional interchange of opinion regarding points of difference—not on trivial matters of flavour or about placbos, but on the universal remedies which are possessed of inordinate potency. We may claim for the British Pharmacopœia that it has done more in this matter than any other by adopting the centesimal principle for liquors where that was necessary, and it has also led the way by endeavouring to bring potent galenical preparations within the limits of constancy; and we have sufficient faith in German pharmacists to believe that they will endeavour to make up the ground which they are rapidly losing.

BRITISH PHARMACEUTICAL CONFERENCE.

THE Conference is to make the acquaintance of Leeds on Monday, September 1. It seems strange, in looking over the list of its meeting-places since its inauguration in 1863, to find that this important business and educational centre does not figure amongst them, but it is noteworthy that one of the first secretaries, Mr. Richard Reynolds, is a Leeds man, and up to the present that gentleman has taken an active interest in all the proceedings of the body, and has filled the presidential chair. We doubt not that the Conference will benefit from his matured experience at the forthcoming meeting. Leeds pharmacists have been working very hard lately along with Mr. Branson, the local secretary, in making arrangements for the benefit of visitors, and we believe that the attractions offered are likely to bring together a meeting which will beat the record. As to the more solid matter, there is no cause for disappointment. It will be remembered that the Conference last year paid Mr. Charles Umney the high compliment of re-electing him as President, and we quite anticipate that his conduct in the chair will be as efficient in directing discussions into the practical channels as it was at Newcastle. Mr. Umney's acquaintance with practical pharmacy and with the requirements of the trade warrants us also in predicting that his address will be one dealing with such questions as are familiar and interesting to all pharmacists. We learn from the honorary secretaries that so far thirteen papers have been promised, and we give here the titles and names of the authors:—

1. "A Report on Three Years' Experience of Chloroform Water as a Preservative," by J. F. Burnett, F.C.S.
2. "The Solvent Action of Alcohol of Different Strengths upon some of the Drugs used in making Pharmacopœial Tinctures," by R. Wright.
3. "On Glycerine," by J. Lewkowitsch, Ph.D., F.I.C., F.C.S.
4. "Chemical Examination of the Bark of *Oroxylum indicum*," by W. A. H. Naylor, F.C.S., F.I.C., and E. M. Chaplin, F.C.S.
5. "A Comparative Examination of the Tests for Methylated Spirit," by E. J. Millard and A. C. Stark.
6. "The Estimation of Nitrites in Drinking-water," by J. C. Thresh, D.Sc., M.B.
7. "Alkaline Sulphites," by C. H. Bothamley, F.I.C., F.C.S.
8. "Antidotes to Strychnine," by Louis Siebold, F.I.C., F.C.S.
9. "The Medicinal Properties of some of the Indigenous Flowers of Southern India," by Dr. P. S. Mootoswamy, F.L.S.
10. "Note on *Strophanthus hispidus*," by E. M. Holmes, F.L.S.

11. "The Constitution of Synthetic Remedies, explained from a chemical point of view, showing their relationship one to another," by J. Hodgkin, F.I.C., F.C.S.

12. "Hydrargyri Iodidum Viride," by W. Martindale, F.C.S., and W. A. Salter.

13. "Note on a Double Chloride of Caffeine and Mercury," by R. H. Davies, F.I.C., F.C.S.

We do not recollect having received the list of papers so early before, and this is a fair indication that the meeting is likely to be a good one from a purely pharmaceutical point of view. Although the fact cannot be overlooked that the Conference meetings are very largely taken advantage of for the renewal of friendships, and for throwing off the dross which is apt to grow upon the hard-working pharmacist, still the reading and discussion of communications on pharmaceutical topics is the principal object of the meeting, and the vitality of the Conference is best maintained by a selection of really attractive communications. It is evident, from the above list, that there is still room in the forthcoming programme for half-a-dozen or more papers dealing with galenical pharmacy, especially topics which will induce general discussions. For an obvious reason subjects relating to the everyday work of the pharmacist always succeed in drawing the crowd and inducing free interchange of opinion; but whether it is want of courage to appear before a big meeting with an apparently small subject, or whether it is that paper-writers will not unbend, it is these very topics which are always scarcest. Perhaps those who have the material for papers on everyday subjects may feel that they are not wanted, but they have only to try once to find how well such communications are appreciated.

COMMENTARY.

NOTHING LESS THAN A KNIGHT will do for Bloomsbury Square nowadays. We refer to the scssional address, and not to the jubilee. Sir Edward Sieveking, M.D., will officiate at the opening of the session in October.

MEDICAL DISPENSING.—Here is an advertisement from a Yorkshire paper which deserves consideration at the present time, when there is a general desire on the part of pharmacists to ensure that the dispensing of medical prescriptions shall be entrusted to qualified persons only:—"Wanted, a surgery boy; one with some experience of dispensing preferred.—Address E., &c., Leeds."

PROPRIETARY PREPARATIONS IN THE STATES.—At a recent meeting of the Pennsylvania Pharmaceutical Association, Mr. M. N. Kiine attempted to reply to a query demanding what the proportion of proprietary preparations purchased by chemists might be in comparison with other goods. He based his reply upon statistics received from five representative druggists in as many towns of the largest cities of the State, the orders extending over three months. In that time 67 per cent. of the money value of the orders consisted of patent proprietary articles, and nearly 1 per cent. was packed goods, the rest being drugs and chemicals. Further analysed, the patent and proprietary articles were reduced to 54 per cent.; special pharmaceutical preparations came out at 4 per cent., galenical preparations at 6 per cent., and packed goods remained the same. It would therefore seem from this analysis that 35 per cent. of the druggists' purchases consist of articles to which they may give their own personal guarantee; and this percentage would be further reduced on taking into consideration the fact that it includes combs, brushes, syringes, surgical instruments,

and other druggists' sundries, as well as corks, bottles, and goods of that nature.

DOCTORS AND CHEMISTS.—Dr. Arthur Tuxford, M.D., L.S.A., of Boston, Lincolnshire, has no love for consulting chemists. There was an inquest held in his town last week regarding the death of a child from a fit. It seems that the child had been severely scalded a few days before, and was taken to a local chemist. The safe treatment in such cases was advised by the chemist, and under it the child was progressing favourably; but it was taken out one day, and afterwards was seized with convulsions. Dr. Tuxford was sent for twice before he came, and when he appeared all hope of saving the child seems to have gone. At the inquest the coroner had some difficulty in getting Dr. Tuxford to keep to the facts of the case, rather than go into very strong insinuations against chemists. The remarkable thing is that in this instance the doctor could say nothing against the treatment of the child by the chemist, and the jury entirely acquitted the latter of blame. On the face of it, it is difficult to understand what reason Dr. Tuxford had for his wild accusations; and it is certain that chemists will be consulted in cases of emergency so long as medical men do not respond promptly when they are called to them.

DRUGS FOR THE ARMY.—On another page we report very fully the discussion which took place in the House of Commons last week on the supply of drugs to the army medical department. Mr. Arthur O'Connor was the gentleman who objected to a continuation of the system which has been recognised by the department for many years, whereby the supplies are obtained exclusively from two firms, namely, the Apothecaries' Company, and Messrs. Savory & Moore. This is a very substantial business, as the vote amounts to 12,000*l.* a year, and as the prices are not regulated by contract, these firms naturally endeavour to retain the privilege as long as they can. Mr. O'Connor was not quite correctly informed on some points; for instance, he thinks Mr. Bannister is at the head of the Somerset House laboratories; he asserts that Messrs Savory & Moore are not so favourably placed as other wholesale houses for obtaining their supplies; and when he said that that firm "are nothing but tradesmen," he meant no doubt to be sarcastic, but the inference was entirely incorrect. Apart, however, from these considerations, the fact remains, that the system on which the army department is supplied with its physic differs entirely in principle from that generally recognised in Government departments, and it would be no hardship to anyone to throw the contracts open to the wholesale trade at large. This is a course which we have before now advised, and since the Government has an efficient controlling department in the Somerset House laboratories, and the army commissioners are now men who are qualified to judge of the medicines they handle, most of them being Minor men or holding an equivalent qualification, Mr. Stanhope should find little difficulty in complying with Mr. O'Connor's request.

THERE ARE STILL JUDGES IN BERLIN.—"Il y a des juges à Berlin." The saying has been rendered famous by Voltaire in connection with the story of the successful defiance of Frederick the Great by the plain miller whose property the king coveted. That there are still judges in Berlin who dare to pronounce a common-sense verdict, even if it involves the discomfort of high and mighty officials, is a fact upon which we congratulate Dr. Böttger, the editor of the *Pharmaceutische Zeitung*. The case in which our colleague has come off victorious arose out of some comments in our contemporary against the official inspection of a chemist's shop. Last year the State officials charged with

the duty of inspecting pharmacies reported unfavourably on the condition of a certain shop in Elberfeld. The proprietor of that business protested against what he considered the unfairness of the officials in the columns of the *Pharmaceutische Zeitung*. An official circular was thereupon forwarded to all pharmacists in the district of Elberfeld warning them that it was unbecoming to criticise Government orders in the public press. The *Pharmaceutische Zeitung* had the courage to deny the right of the Government to issue such a circular, and, moreover, criticised its tone generally, adding that it might occasionally suit the authorities to prevent their administrative acts becoming public, and describing their policy as a "Vertuschungssystem," or "hushing-up system." A Government prosecution for insulting State officials was thereupon commenced against Dr. Böttger, who, in his defence, maintained the right of apothecaries to publish official notices affecting their interests, and that of public journals to comment upon such matters. He also denied that the words "hushing-up system" could be construed as an insult to the Government. The court found for Dr. Böttger on all counts, and dismissed the suit with the remark that although the words "hushing-up system" were on the verge of the inadmissible, yet the law did not regard them as punishable.

ON MORPHINE AND ITS DERIVATIVES.

By D. B. DOTT, F.R.S.E.

HAVING nothing more profitable to do in the session of 1887-88, I spent the time in a joint research, with Dr. Stockman, on the pharmacology of the morphine derivatives. I would say just a word about our workshops. The chemical laboratory of the materia medica department in Edinburgh University is the most pleasant of laboratories to work in. Elegantly fitted, well lighted, properly ventilated, with the windows commanding a fine view of the Moorfoot Hills, a chemist would be difficult to please who was dissatisfied with the place, although it does not possess the perfection of arrangements to which the chemical men on the other side of the quadrangle are accustomed. Immediately adjoining is the balance-room, lighted only from the roof, and redolent of pitch-pine. Then follows the long and lofty pharmacological laboratory, where Dr. Stockman was wont to work in an atmosphere of frogs and rabbits, cats and dogs. In that room are to be seen comfortable cages for the larger animals, and slate tanks with wire covers for the frogs. The frogs are not Scotch ones, but are imported from the neighbourhood of London. Sometimes a different species or variety from "the happy Fatherland" is employed, as it is considered desirable to use them when comparing results very strictly with German researches. On the opposite side of the corridor is the dark room for spectroscopic and similar work. This room I used occasionally for the polariscope. During several months we worked in our respective rooms, and the results of our labours have partly been published, and will shortly appear in complete form in the "Proc. Roy. Soc. Edin." No one who has not had the experience can possibly tell the amount of work involved in such a research. It frequently requires several experiments before you obtain an appreciable amount of the substance you want, a great many more before you make sure that the substance is pure, and all the while you are recrystallising and purifying, you see your quantity "growing small by degrees and beautifully less." Again, the vast number of weighings required threatens to induce symptoms of balance-on-the-brain. As for Dr. Stockman's labours, I need only say that they were more difficult and troublesome than my own, while they were carried on in the midst of other duties. Being only an amateur physiologist, I cannot hope to give a very complete account of our results, but the following are the principal facts. All the opium alkaloids, so far as examined, are narcotic, tetanising and paralysing, and the same holds true of the ordinary substitution and addition

compounds. One property may become very predominant, and so obscure the others, but these are present all the same. Morphine contains two hydroxyl groups, the hydrogen of one of which is replaceable by an alcohol radical, and the hydrogen of both hydroxyls by acid radicals. Codeine is morphine with one hydrogen replaced by methyl, which change decreases the narcotic and increases the tetanising power of the body. The same effect is produced by the introduction of an acid radical. Thus, acetyl-morphine has the same physiological actions as methylmorphine, and will no doubt be found of equal value therapeutically. Now, the great drawback in the preparation of codeine artificially is the formation of the addition compounds, especially methylmorphine chloride, and possibly other by-products from which morphine cannot be recovered. On the other hand, acetylmorphine can be prepared with very little loss of any kind, and therefore should the demand for codeine increase, that alkaloid would most likely be to a great extent superseded by acetylmorphine. If methocodeine (otherwise methylmorphimethine) has really the constitution ascribed to it, the replacement of a hydrogen in direct contact with a carbon would seem to cause a much more profound change physiologically than the replacement of a hydroxyl hydrogen, as in methocodeine the narcotic power has disappeared, and the compound exhibits the effects of a powerful muscle-poison. Chlorocodide, in which a hydroxyl group has been replaced by chlorine, has a similar action, which confirms the conclusion that when the replacing element or radical comes into direct union with the carbon atom, the physiological change is much greater than when merely a hydroxyl hydrogen is replaced. It is just possible, however, that a more complicated molecular change has occurred in these cases than simple replacement. The fact that apomorphine has a nearly related action to these bodies, is a hint in that direction. The belief is general that when, for instance, methyl iodide is directly combined with an alkaloid, the original action of the alkaloid practically disappears, and only a paralysing, curare-like effect is manifest when the drug is administered to an animal. Dr. Stockman shows how far this view is erroneous, and that when proper precautions are taken, the other actions are quite apparent. In short, just as the replacement of hydrogen in the morphine molecule by methyl increases the tetanising effect, so the addition of methyl iodide to the molecule increases the paralysing effect. Much time was occupied in determining points of pharmacological importance, which have been only vaguely investigated by previous observers. Besides that, a good deal of work was done on narcotine, narceine, &c., the results of which remain to be published. Upon the whole, we have reason to be satisfied with our work, though it would have been easy to adopt a different line of investigation, which would have made more show for the amount of trouble expended.

Gazette.

PARTNERSHIPS DISSOLVED.

Grimshaw & Barstow, Guide Bridge, near Manchester, veterinary chemists and horse-condiment manufacturers.

Lowe, Dalton & Lambert, Lincoln, surgeons, as far as regards C. G. Dalton.

THE BANKRUPTCY ACT, 1883.

ADJUDICATIONS.

Baron, Jane, and Baron, Job Hold (trading as J. Baron and J. H. Baron), Barnsley, tobacconists, wholesale druggists, seedsmen, jewellers, clothes and general dealers.

Trubshaw, Charles, late of Chesham, now of Hanwell, chemist and druggist.

ORDERS MADE ON APPLICATIONS FOR DISCHARGE.

Nash, Josiah, Milton-next-Gravesend and Sevenoaks, mineral-water manufacturer. Discharge suspended for three months.

Norton, Charles Benjamin Spragge, Bristol, formerly trading with W. H. R. Glass, U. Glass, and W. J. W. Powell, as the Castle Pharmacy and Tea Company, chemist. Discharge refused.

Steadman, George, Sheffield, botanist. Bankrupt to be discharged subject to certain conditions.

Legal Reports.

THE SULPHATE OF AMMONIA DISPUTE.

IN the City of London Court on August 8, the case of Forbes, Abbot & Lennard v. Paul Hecker & Co., for the balance of 40*l.* due on a 6640*l.* transaction in sulphate of ammonia, came before Mr. Commissioner Kerr by way of appeal from Mr. Registrar Wild. The question in dispute was the correctness of the weights, Mr. George Kebbell, who appeared for the defendant, alleging that in some of the consignments the weights differed as much as a ton in a cargo of 50 tons. The Registrar had held that no evidence could be given as to the weight of the goods when they arrived at Hamburg and other such ports, because all the plaintiffs had to do was to deliver alongside the vessel in the Thames. Mr. Kebbell submitted that unless he was allowed to call those witnesses it would place him in an awkward position. He appealed against the Registrar's finding, but on Friday Mr. Commissioner Kerr dismissed the appeal with costs. The adjourned reference before the Registrar will be heard on Monday, August 18.

LABELS AS TRADE-MARKS.

IN the Chancery Division of the High Court of Justice on Friday, August 8, a motion was made (by way of appeal from a refusal by the Comptroller-General to register a trade-mark) to direct the Comptroller-General of Patents, Designs, and Trade-marks to proceed with the registration of a trade-mark, No. 86,178, carried on by Bryant & May (Lim.), match manufacturers. The registration was opposed by Messrs. R. Bell & Co., match manufacturers. The trade-mark was not intended, it was explained, to be used in England, but in Spain and Spanish colonies. The trade-mark consisted of an upright, long, yellow label, at the top of which were representations of the obverse and the reverse of a medal side by side, surmounted by crowns. The words "Medalla de Oro" were in a scroll below and half round the medal; below that were the words "Exposition Universale de Barcelona" and on the lower part of the label were the words "Bryant & May, Royal Wax Vestas, London." The whole was surrounded by lines; the various parts were separated by lines, and there were various printers' embellishments on the label. Bryant & May (Lim.) had obtained a gold medal at the Barcelona Exhibition, 1888, and their object in seeking to obtain registration in this country of their new label was stated to be that they might be assisted in getting protection in Spain against imitators who sold matches in that country with very similar labels, some of which bore the name of Bryant & May on them. In the written application it was stated "the essential particular of the applicants' trade-mark is 'Bryant & May'; they do not claim any right to the exclusive use of the added matter." The question was whether the registration could be supported as consisting of or containing one of the essential particulars for a new trade-mark as laid down by the 64th section of the Patents, Designs, and Trade-marks Act, 1883, as amended by the Act of 1888, which was sought to bring it within the heading (c) of the six sets of marks authorised by the section as amended. The words of the heading are, "A distinctive device, mark, brand, heading, label, or ticket." It was urged that, although there was no separate element in the label which could be called a distinctive device, the label, as a whole, was "a distinctive label." The Comptroller considered that the case of "Orr Ewing v. the Registrar of Trade-marks" (4 App. Cas., 479) laid it down that it was necessary, when considering a question of want of distinctiveness in a label, to ascertain whether it contained one or more of the essential particulars required by the Act; and applying that test, he was of opinion that the label sought to be registered contained none of the essential particulars required.

Mr. Justice North, in giving his decision, pointed out that the name of the applicants on the label was not printed, impressed, or woven in any particular or distinctive manner so as to form a good subject of a trade-mark, and that none of the other words were such as to come within the marks allowed to be registered. The only question was, he said, whether the label came within part (c) of section 64 of the Act. It

was a matter of common knowledge that such a device of a medal as this mark contained was commonly used in connection with trade-marks. In his opinion the Comptroller was right in holding that the label did not contain any of the essential particulars enumerated in the section, and he refused the application.

DISPUTE ABOUT THE RETURNS OF A CLIFTON BUSINESS.

MR. JUSTICE MATHEW and a jury sitting at the Bristol Assizes had before them on August 7 the case of Keevil v. Richards and others, which was an action brought by Mr. Robert Keevil, pharmaceutical chemist, of Stratton-on-the-Fosse, Bath, against Mr. Thomas Coombes Richards, pharmaceutical chemist, 8 York Buildings, Clifton, and his father and mother, for the first instalment of various payments on a promissory note, which Mr. Bompas, Q.C. (for the plaintiff) explained was given as part price of a chemist's business in Clifton. The main question for the consideration of the jury was whether the sale of the business was a valid sale or not. Plaintiff had for 30 years carried on business at York Buildings, Clifton, and during that period he greatly improved his business, and bore an unblemished character. Circumstances occurred which made it desirable for Keevil to give up business. He met with an accident which greatly affected his health, so, having other means of a livelihood, he decided to retire, and in June, 1888, he advertised his business for sale. The advertisement was replied to by the defendants, who asked plaintiff for particulars of the business. Keevil thereupon wrote asserting that for the past six years or so the receipts averaged 1,000*l.* per annum; that in some years they amounted to 1,100*l.*, 1,200*l.*, and 1,300*l.*; and he put the price at 1,100*l.*, which was to include certain patent rights, stock-in-trade, and shop-fittings. Considerable correspondence passed between the plaintiff and defendants. The latter looked into the character of the business, and examined the books, and the result was that they decided to purchase the business. Richards took the house at 45*l.* a year; 500*l.* was paid down, and a promissory note, signed by Richards, his father and mother (who are parties in the action), was given for nearly 600*l.*, payable by instalments, then agreed upon. Things went on pleasantly enough during the first year, at the end of which the first instalment of 100*l.* was due, of which 20*l.* only was paid. Complaints were then made that the receipts from the business during the year were only 800*l.*, that the reports concerning it were discouraging, and that Keevil must have been mistaken in saying that his average receipts were 1,000*l.* Under the circumstances Richards asked for an abatement of a portion of the purchase-money. Plaintiff expressed his regret that the receipts should not have been more, and said that complaint had been made of slackness of business by other chemists of Clifton. He adhered to his original statement as to the value of his business and his receipts, and insisted on the fulfilment of the contract. Richards refused, the matter was put into the hands of solicitors, and hence the present action.

Robert Keevil, the plaintiff, was called, and bore out this statement. He added that in October, 1889, he made an offer to take back the business, and told the son if his returns were less than his (plaintiff's) last year, he should only bear a proportion of the loss, but that offer was not accepted.

In cross-examination, witness stated that he had a business in Stapleton Road, carried on by his son-in-law. He had also a business in White Ladies' Road, which he handed to his son-in-law six years ago. The business in York Buildings was carried on by a manager under him, and for about 14 years he had ceased to live in York Buildings.

His Lordship threw out the suggestion that the case might be referred, and after the learned counsel had consulted with their clients, and failed to come to an agreement, he said if he could assist them he would be happy to do so.

Mr. Bompas and Mr. Bucknill, Q.C. (for the defence) accordingly had an interview with the learned judge in his private room. This, however, failed to stop the case, and Mr. Bucknill continued his cross-examination of Mr. Keevil.

Mr. C. H. Tucker, auctioneer and accountant, had examined

plaintiff's books, and testified that the average takings for six years were at least 1,097*l.* a year.

Mr. Bucknill having spoken for the defendants, remarking in the course of his speech that he relied on his ability to prove that the business was a declining one, and that Mr. Keevil had made a mis-statement,

Thomas Coombes Richards was called. He stated that Mr. Keevil had said that his returns had not been less than 1,000*l.* a year for any one year, with net profits of from 500*l.* to 600*l.*; and that he gave 200*l.* for the business 30 years ago. He took it on July 27, and at the end of the first year's business he had taken in cash 555*l.*, also 128*l.* on old accounts, which latter sum he paid over to the plaintiff. The outstanding accounts amounted to 90*l.*. From August, 1889, to August, 1890, the cash takings amounted to 605*l.*, and the outstanding accounts amounted to 189*l.*

The Rev. Thomas Richards, Wesleyan minister, residing at Gosport, also gave evidence, stating that in the belief that plaintiff was an honourable Christian man, he only made a cursory examination of the books submitted to him.

Mr. A. S. Cavill, accountant, said he had examined the books, and discovered that the total takings for the six years ending June 30, 1888, were 6,292*l.*—an average of 1,029*l.* a year. The takings for 1880 were 994*l.*; for 1887, 993*l.*; and for 1888, 772*l.*

Henry John Walker, pharmaceutical chemist, Bath, stated that the value of a chemist's business, the takings of which were 645*l.* a year, would be 500*l.* He would not give more than 750*l.* for the business in question, including stock, fixtures, and goodwill.

Counsel addressed the jury.

The Judge, in summing up, said the question for the jury was whether or not a fraud had been committed. If they found that there had been no fraud, then the verdict must be for the plaintiff.

The jury, after less than a minute's deliberation, said they considered that there was no evidence of fraud, and gave a verdict for the plaintiff.

COMMISSION FOR SELLING A PRACTICE.

IN the City of London Court on Wednesday, before Mr. Registrar Wild, the case of Orridge v. Rattray was heard. The plaintiffs, Messrs. Orridge & Co., medical and pharmaceutical transfer agents, of 32 Ludgate Hill, E.C., sought to recover the sum of 29*l.* from the defendant, Mr. John Moysey Rattray, of Rooklane House, Frome, being commission at the rate of 5 per cent. on 660*l.* payable to the plaintiffs in respect of a partnership brought about by them between the defendant and Mr. J. Kingdon Frost.

Mr. Lyndon Bell was counsel for the plaintiffs, and Mr. Mr. Francis Pain for the defendant.

In explaining the circumstances, Mr. Bell said there was no dispute that the partnership was introduced, and that the commission was agreed to at 5 per cent. up to 500*l.* and 2½ per cent. over, making 29*l.* The question was whether the plaintiffs had introduced Dr. Frost through their instrumentality or not. The plaintiffs carried on a business of a very extensive description, and at the end of last year they were in communication with Dr. Frost, who wanted a partnership, he having about 500*l.*, of which he would pay 300*l.* down. He desired to marry, and until he got a regular practice he could not do so. He put himself in communication with the plaintiffs, and stated he wanted a partnership. A correspondence took place, and nothing suitable was found until in March, when Mrs. Rattray, the wife of Dr. Rattray, called on the plaintiffs and said they wanted an assistant. She saw Mr. Gibbs, the confidential manager of the plaintiffs, and said her husband required an assistant, or *locum-tenens*, and, if he suited, he would be taken into partnership. Thereupon there was a conversation as to the amount of business done, and the terms of the partnership were discussed. They went into considerable details, and it was mentioned that the business produced about 1,600*l.* a-year, and that a year and a half would be required. It was pointed out that Dr. Frost would not be able to pay all the money required down, to which Mrs. Rattray said he need only pay a sum down, and the rest out of the profits afterwards. Mrs. Rattray asked what the terms would be for effecting the partnership, and Gibbs told her 25*l.* He gave a doquet of the terms to her, and upon her earnest request

she obtained the name and address of Dr. Frost. He was communicated with, and taken as an assistant at three guineas a week, and afterwards entered into partnership with the defendant in May, Frost to have a third of the profits.

Mr. Chas. H. Gibbs, the manager of the plaintiffs, as well as Mr. Hawkins, who carries on business as Orridge & Co., gave evidence in support of the claim.

Dr. Rattray, the defendant, said he gave his wife authority to obtain an assistant at 80*l.* a year, or she was to get a very good and presentable unqualified assistant. Even somebody to make up medicines would have done. That was the limit of her authority. She telegraphed and asked if he would have a three-guinea assistant, and he replied he would, as he wanted some help so badly, he being affected by the influenza epidemic. He had no intention of taking a partner. He did as a matter of fact afterwards enter into partnership with Dr. Frost.

Mrs. Rattray denied most positively that she ever told the plaintiffs her husband would want a partner. All she went to the plaintiffs for was an assistant.

Mr. Registrar Wild found for the plaintiffs, and costs were allowed.

A CHEMIST PROSECUTED UNDER THE VETERINARY ACT.

At the East Grinstead Petty Sessions on Monday last, John Tully, chemist and druggist, East Grinstead, was charged with using the title of "veterinary surgeon," he not being registered as such. Mr. J. Hillman, who appeared for the defendant, asked for the information on which the summons was issued. The deposition was produced, and it showed that the information had been laid by Mr. Harold Leeney, veterinary surgeon, and was to the effect that the defendant did take or use the title of veterinary surgeon at East Grinstead Police Court on June 16 last. Mr. Hillman asked for Mr. Leeney to be put in the box, but he was not present, and counsel then submitted that the case could not be proceeded with, as the information was not signed. The chairman of the sessions, considering that Mr. Leeney was practically the prosecutor, thought that he should be present; but Mr. Buckwell said that the Royal College of Veterinary Surgeons were really the prosecutors. To this Mr. Hillman replied that, if the college were the prosecutors, the sealed resolution authorising the prosecution ought to be produced; and, although the plaintiffs contended that this was not necessary, it was pointed out that the Court of Queen's Bench had recently set aside an action because of the non-production of sealed authority to prosecute. At this stage it appeared clear that the action would be dismissed, and Mr. Hillman asked for costs, upon which a discussion ensued as to whether they ought to be paid by Mr. Leeney or by the Royal College of Veterinary Surgeons. Ultimately Mr. Hillman said he would not ask for costs, but would take another remedy. Mr. Buckwell then asked the magistrates if they would grant him a case provisionally, as the Royal College might instruct him in the matter, but the chairman did not see any point on which to grant a case. The magistrates dismissed the suit.

BANKRUPTCY REPORTS.

WILLIAM SAMUEL WEEDING, late of 84 High Street, West Cowes, Chemist and Druggist.

At the Isle of Wight Bankruptcy Court on August 6, before his Honour Judge Leonard, this debtor applied for his discharge. The Official Receiver reported that the estate had paid a first and final dividend of 1*s.* 6½*d.* The debtor had omitted to keep such books as are proper and usual in the business carried on by him. At his public examination the debtor admitted that he did not keep proper accounts of his income and expenditure. He continued to trade after knowing himself to be insolvent. In 1884 the debtor purchased, for the sum of 300*l.*, the business which had been carried on by his father for many years. He borrowed the whole of his money from his mother-in-law, and at that date he owed personal debts amounting to between 150*l.* and 200*l.*, and had no available assets. He was therefore insolvent when he began business. The

debtor states that he was not aware of his insolvency until he consulted his solicitor just prior to filing his petition. The debtor's failure appeared to be in great measure attributable to his having suffered from a long and painful illness, which for some years prevented him from properly attending to his business. The Official Receiver further stated that he had learnt that the debtor had a reversionary interest, to the extent of one-fourth on the death of his mother, and one-fourth on the death of his father, in a sum of 650*l.*, and he asked that the matter might be adjourned for further inquiries. This was agreed to.

Re CHARLES GODWIN PREECE, Bildeston, Suffolk, Chemist.

THE public examination of this debtor came on for hearing at the Ipswich Bankruptcy Court last Monday, before Mr. Registrar Grimsly. The summary of accounts showed liabilities amounting to 966*l.* 1*s.* 4*d.*, and assets estimated at 225*l.*, thus showing a deficiency amounting to 940*l.* 9*s.* 10*d.* In answer to the Official Receiver, the debtor stated that he started business at Bildeston about four years ago. He owed 180*l.*, part of which was spent in household expenses at Framlingham. In reply to a question as to whether his creditors knew of his position when he commenced business, the debtor said his father and his brother-in-law knew his position when they advanced him money. The Official Receiver remarked that the debtor's brother-in-law had lent him 100*l.*, left him by his father, and his wife lent him 80*l.*, left her by her grandfather. No doubt Mrs. Preece now wished that the old gentleman had lived a little longer. The debtor denied that he had lost money through hetting transactions. He admitted that he once went to Newmarket for a day's holiday, but he did not bet, and he would positively assert that he had not been to more than three race meetings during the past four years. The reason he had subscribed to *Stubb's Mercantile Gazette* was to assist him to collect his book debts, not because he expected to see his own name in it. A Mr. Growse, who was one of his sureties for a certain amount, sent to his shop two or three days before the petition was filed, and gave an order for goods to the value of 7*l.* As he was out at the time, his wife took the order, and Mr. Growse cleared the shop of a number of things. He had lately arranged to act as agent for Messrs. Prentice Bros., of Stowmarket, and he owed them 50*l.* The Official Receiver stated that Messrs. Prentice had written to the persons to whom the goods had been supplied, saying that the money should be paid to them, but from the correspondence with that firm it appeared that they proposed to charge the debtor for the goods. The debtor was finally allowed to pass.

CAMPHOR A SOLVENT OF IODOFORM.—The addition of camphor to ether or alcohol increases the quantity of iodoform it is capable of dissolving. Olive oil saturated with camphor dissolves 6 per cent. of iodoform.

It has been pointed out to us, and we gladly take this opportunity to acknowledge, that much of the substance of the interesting notes on the cultivation of aloes in the Dutch West Indies inserted in our issue of July 26 originally appeared in the "Tydschrift" of the Colonial Museum at Haarlem, in Holland.

OBESITY.—Homœopaths have a simple method for reducing stoutness. A middle-aged gentleman who consulted Dr. Drysdale for a skin-disease, was told to stop his beer, and was put on drop doses of kali bichrom. 1st cent. night and morning. While the medicine was being taken, the patient's body weight was reduced 1 lb. per week. Unfortunately, a friend of his tried it and it had no effect. Was it not the absence of the beer which accounted for the loss of weight?

GASEOUS HYDROBROMIC ACID can be made by passing a stream of sulphuretted hydrogen from a "continuous" apparatus through a layer of bromine contained in a tall, narrow vessel, and covered by a layer of water or hydrobromic acid. The gas is passed into a second flask which contains a solution of potassium bromide in hydrobromic acid holding a small quantity of red phosphorus in suspension, and the gas which issues from this flask contains neither bromine vapour nor hydrogen sulphide.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may within one month of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1890, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," July 30, 1890.

"WALLSEND," and sketch of safety-lamp on shield; for chemical substances used for veterinary and sanitary, &c., purposes. By The Wallsend Chemical Company, Wallsend, Newcastle-on-Tyne. 97,577.

"THE HYGEIAN," and device with other wording for label for chemical substances used for veterinary and sanitary, &c., purposes. By The Hygeian Fluid Company, London Road, Gloucester. 98,152.

"VINOLIA POWDER" and "VINOLIA SOAP," and other wording; for medicated powder and perfumed soap. By Blondeau & Cie., 2 Perrin Street, Ryland Road, N.W. 95,147, 95,148, 95,149.

"MULTUM IN PARVO," and sketch of bottle with signature across; for chemical substances and medicated articles for use in medicine and pharmacy, and for mineral waters and perfumery, &c. By Wm. Duckworth, trading as Duckworth & Co., 93 Corporation Street, Manchester. 96,940, 96,943, 96,944.

"GLYCOZONE"; for a non-aërated and non-alcoholic beverage. By M. A. Redenski, 38 Upper Bedford Place, Russell Square, W.C. 96,894.

"KO-KETTEE"; for food substances. By W. J. Geenes, trading as Geenes & Son, 8 & 9 Chiswell Street, London. 97,995.

"STREET," and sketch of an old-fashioned pump; for mineral and aërated waters. By J. Law, trading as Meadowcroft & Law, Pump Street, Blackburn. 97,443.

"CANARY," and sketch of that bird on branch of tree; for perfumed soap. By J. Crosfield & Sons, Warrington. 97,787.

"VICTOR"; for perfumed soap. By D. Houldsworth & Son, Heckmondwike. 97,845.

"GLACIER"; for furniture cream and polish. By H. Bell, 62 Quay, Waterford. 97,578.

"EUREKA" and "VICTOR"; for polishing or silversmith's soap. By D. Houldsworth & Son, Heckmondwike. 97,788, 97,846.

From the "Trade Marks Journal," August 6, 1890.

"IMPERIAL GRANUM"; for a preparation of wheat as a medicinal food. By The Imperial Granum Company, New Haven, Connecticut, U.S.A. 97,371.

"SCENTLESS VINOLIA SOAP"; for a soap for use in medicine and pharmacy, and for toilet purposes. By Blondeau & Cie., 2 Perrin Street, Ryland Road, Kentish Town, N.W. 97,547, 97,548.

"GARRETT'S HERBINE," and picture of Roman soldier with sword and shield, and snake; for herbal preparation for blood diseases. By G. G. Jackson, trading as Garrett, Cullenswood Avenue, Ranelagh, Dublin. 97,588.

"KAPUTINE"; for a cure for headache. By G. Gledhill & J. A. Dyson, trading as The Kaputine Company, Lidget Street, Lindley, near Huddersfield. 98,057.

"WILSON'S FOOD" for infants and invalids, and picture showing cherubs; for a food. By Wilson & Co., 19 Market Place, Boston, Lincolnshire. 97,044.

"THE RUGBY MINERAL-WATER COMPANY (LIMITED)" and coat of arms; for mineral and aërated waters. By The Rugby Mineral-water Company (Limited), 12 Albert Street, Rugby. 97,501.

"D," with sketch of a peacock within the letter; for mineral and aërated waters. By R. Davis, 20 Maddox Street, Regent Street, W. 97,726.

Diamond-shaped device, with name of firm and other wording; for mineral and aërated waters. By Shelvey & Co., German Place, Brighton. 97,903.

"COPPER, TIN, AND FISH," and the letters "J. R."; for mineral and aërated waters. By John Rowe, Gulval, Penzance. 98,188.

"MYSTIKOS"; for a hair tint. By Robert Hovenden & Sons, 31 and 32 Berners Street, W. 97,253.

"TIP-TOP," and sketch of a peg-top; for perfumed soap. By Brown & Deighton, Preston, Lancs. 97,941.

"BORAX SOAP" on label; for perfumery and toilet articles. By Jesse Ascough, Handsworth, Stafford. 98,086.

"AENLAION"; for a preparation for the hair. By Daniel Easton, 4 Argyle Street, Greenock. 98,128.

Fanciful sketch of two fishes; for perfumery. By W. Mayerstein & Co., 5 London Wall Avenue, London. 98,148.

"MAIOLINE"; for toilet articles. By Wm. Burrows, 243 Brompton Road, London. 98,324.

From the "Trade Marks Journal," August 13, 1890.

"OZONE CHAMELEON SALINE," and picture of chameleon; for a medicinal preparation for human use. By J. Harrington, 4 Spicer Lane, Newcastle-upon-Tyne. 97,485.

"LIPTONINE"; for an ointment for cracked lips and tender skins. By James Holt, 4 Dorrington Place, Carlton Hill, Leeds. 98,387.

"ACCOMODATO BELT"; for abdominal belts, &c. (not medicated). By Vincent Wood, 29 Paternoster Square, London. 86,575, 86,576.

"LAMB'S WOOL"; for mineral and aërated waters. By J. Lyon & Co, Lord Nelson Street, Liverpool. 91,045.

CANADIAN NOTES.

AMMONIA MANUFACTURERS have combined to put up the price of their product, and have succeeded so far that the initial advance has been from 5½ to 8 cents per lb.

GONE TO ENGLAND.—Mr. W. T. Atkinson has sold his drug business in Oshawa, Ontario, and is to start in Toronto as a manufacturer's agent, but before he does that he is to make a business visit to England.—Mr. John Callard, of London, Ontario, is at present in England on pleasure intent.

PROFESSOR F. T. HARRISON, of the Ontario College of Pharmacy, has qualified at Ottawa as a public analyst. A stiff examination has to be passed for this distinction, and so few in the Dominion have passed it, that they can be counted on the fingers of one hand.

DEAR ALCOHOL.—The druggists of Toronto are endeavouring to resist an increase of 20 cents per gallon in the price of alcohol, the production of which is controlled in Canada by three distillers. This increase has been accompanied by a new scale of discounts, which, being based upon the quantity bought, naturally operates in favour of the larger houses. The result has been that a prominent Toronto firm has addressed a circular to the principal druggists of the Dominion, asking them to unite against the distillers in order to secure the larger discount by purchasing the alcohol in car lots. But so far the answers have not been very favourable. In Toronto the distillers' prices are as follows, duty paid: Under 5 barrels, \$3.70 cash; 5 to 10 barrels, \$3.70, 2½ per cent. discount; 10 to 50 barrels, \$3.70, 5 per cent. discount; carload, 50 barrels, \$3.70, 10 per cent. discount. One other feature of the proposal emanating from Toronto was that the druggists should unite to import the alcohol from Germany; and although it is claimed that it could be landed, duty-free, cheaper than Canadian spirit, some fear that the duty of \$2 per proof gallon (equal to \$3.30 per gallon 65 over-proof) will effectually prevent the importation of alcohol from Germany or elsewhere, because the present carload price of Canadian spirit in Montreal is only \$3.31½ per imperial gallon, or but 1½ cents over the duty.

A FEW CORN-CURES.

DR. H. M. WHELPLEY states in "Notes on New Remedies" that probably the action of the most popular corn-cures depends on salicylic acid. Among the many therapeutic properties of this comparatively new remedy is its power to disintegrate epithelial tissue. The form he has found useful is to mix 9 parts of salicylic acid with 1 part of extract of cannabis indica and 48 parts of collodion. This is applied to the corn every night with a camel-hair brush. The foot should be clean before it is applied, and the mixture permitted to thoroughly dry before it comes in contact with clothing. There are several other formulæ published for this same mixture, and they usually call for less salicylic acid, but the above amount should be used in order to get good results.

A salicylic-acid corn-plaster is made by melting 6 parts of resin, and adding 5 parts of Canada balsam, and then stirring in 10 parts of salicylic acid as it cools. This can be spread on any suitable medium for a plaster. When used the corn must not be rubbed with the shoe.

Lanolin forms the basis of another salicylic-acid plaster, and cocaine is added with the idea of making it painless. To form the plaster, mix 6 drachms of salicylic acid thoroughly with 10 drachms of lanolin. Dissolve 5 grains of hydrochlorate of cocaine in a small quantity of warm alcohol, and mix the solution with 1 fl. oz. of creosote. Mix one half-ounce of melted white wax with one half-ounce of vaseline, and add the creosote solution. To this add the cocaine solution, and mix.

Among the corn-plasters made without the use of salicylic acid is one composed of 40 parts of resin cerate, 40 parts of galbanum plaster, 15 parts of verdigris, 5 parts of turpentine (the oleoresin), and 3 parts of creosote. There is also in the market a corn-plaster which is ordinary adhesive plaster, with about 15 per cent. of salicylic acid and a small percentage of benzoin.

Salicylic acid is sometimes associated with arsenic, in the proportion of 2 drachms of the salicylic acid with 1 drachm of arsenious acid and 1 oz. of vaseline. This is used as a salve on linen. Still another corn-plaster is made of salicylic acid 1 part, Burgundy pitch 1 part, and yellow wax 1 part.

A caustic corn-salve is made by mixing a hot saturated solution of caustic soda or potassa with twice its bulk of glycerite of starch.

A solution for the cure of corns has been made by dissolving 30 grains of tannic acid in 1 oz. of a mixture of equal parts of tincture of iodine, acetic acid, and glycerine.

This list could be extended, but the above formulæ will enable the energetic druggist to satisfy his customers and aid in filling his money-drawers.

APPARATUS WRINKLES.

MR. FRANK EDEL tells in the *Registered Pharmacist* how, in using a porcelain graduate, he broke the bottom square off. At first he thought it was useless; but it occurred to him that it would be useful as a strainer-frame, and by tying holting-cloth over the bottom, he found it was just what was wanted as a strainer. It is strange, he remarks, that houses making a speciality of druggists' wares have never put anything of the kind on the market, for, if a porcelain straining-frame with handle were offered for sale, there is no question but that it would find a ready sale. Many have tin ones, but they are not to be recommended for use in straining chemical solutions, or in prescription departments, while the porcelain frame would be objectionless and very useful.

By taking an ordinary plasterer's trowel, and having it cut down to proper size, an elegant pill-roller can be made that is very useful and handy. Some years ago Mr. Edel had one cut down in this way, and nickel plated, and found it far preferable to any pill-roller he had ever seen. The ordinary pill-rollers are, to say the least, awkward affairs, and most druggists use a spatula in rolling a small mass. The trowel, as above, will be found the *par excellence* of a pill-roller.

Mr. Edel's note on the porcelain graduate (American for "measure") reminds us of an ingenious method for utilising glass measures the bottoms of which have been broken or chipped so that they cannot stand. If one has reached this calamitous stage, place it in a 2 or 3 oz. chip box, make a paste of plaster of Paris, and, holding the measure upright, pour the paste into the box to the depth of half an inch or thereby. This clings round the bottom of the measure, makes a really serviceable article of it, and the "foot" can be renewed at any time. Support the measure while it is in the box until the plaster sets, and to expedite the setting put a dash of common salt in the plaster.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected, and Translated.

ANTHRAX ALKALOID.

DR. SYDNEY MARTIN's experiments on the chemical products of the action of micro-organisms on suitable media have now extended to the anthrax bacillus, which he cultivated in a medium simulating serum. Two albumoses, a trace of peptone, an alkaloid, and small quantities of leucin and tyrosin were found in the filtrate. Of the alkaloid, he says, in his communication to the Royal Society, it is soluble in absolute alcohol, amyl alcohol, and in water; insoluble in benzene, chloroform, and ether. It is strongly alkaline in solution, and a powerful base, readily forming salts with acids. The sulphate crystallises in small needles or prisms; the oxalate in long, branching needles or flat plates. From the salts the alkaloid is easily regained. In solution, the alkaloid is precipitated by phosphotungstic, phosphomolybdic, and phosphoantimonic acids and platinic chloride, but not by potassium-mercuric iodide. It is slightly volatile, and, when kept exposed to the air, it becomes acid, and loses, to a great extent, its poisonous properties. Animals to whom a poisonous dose of the alkaloid is administered die in coma. After death enormous local subcutaneous œdema is found, with congestion and sometimes thrombosis of the small veins. Peritoneal effusion is occasionally present, and the spleen is usually enlarged, dark, and congested, or simply congested without being greatly enlarged. The fatal dose for a mouse weighing 22 grammes is between 0.1 and 0.15 gramme, death occurring in two to three hours; 0.3 gramme of the albumoses also kills a mouse of the same weight.

THE CONSTITUENTS OF SASSAFRAS OIL.

SASSAFRAS OIL is, according to the text-books, a mixture of 10 per cent. of a terpene, $C_{10}H_{16}$, and 90 per cent. of safrol, $C_{10}H_{10}O$. Since Grimaux and Ruott's investigation there has always been a suspicion that the oil also contains a small portion of a phenol body; but this has not been satisfactorily demonstrated until lately. Dr. C. Pomeranz, during a recent investigation (*Pharm. Post*), treated 3 kilos. of the oil with alkali, and, separating the alkaline solution, treated it with sulphuric acid, and dried the brown oily body which came out with calcium chloride, afterwards submitting it to fractional distillation. Thereby he obtained, at 246-247° C., 7 grammes of a colourless liquid resembling eugenol. A critical examination of this liquid resulted in the conclusion that it is identical with eugenol— $C_6H_5OH \cdot O \cdot CH_2 \cdot C_3H_7$; the benzoyl derivative having a melting-point of 69° C., as compared with 69-70° C., which is that of benzoyl-eugenol.

COLORADO COUGH-ROOT.

UNDER this name Professor Maisch states (*Amer. Journ. Phar.*) that a root has been received on several occasions, which is said to be commonly used in some parts of Colorado. It is evidently derived from an umbelliferous plant, and, having a lovage-like flavour, may possibly be the root of a *Ligusticum*, of which four species are known to be indigenous to the State. The root is masticated, and is also employed, in the form of powder, as a snuff, said to be efficient in catarrh and neuralgic affections.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 14.

THE markets remain exceedingly quiet, and there is not much prospect of any improvement during the remainder of the month, as so many dealers are out of town for the holidays. In drugs the principal changes may be summed up as follows:—Cinchona is rather dearer in consequence of the small quantities offering; for kola nuts, much higher prices have been paid, and there has also been a very strong demand for cardamoms; Turkey colocynth and jalap are reported slightly dearer; camphor unchanged, opium a little weaker, and some concessions have been made in order to bring about business. The speculation in Peruvian balsam is subsiding; Canada balsam is also lower; Guinea grains rather easier; cascara sagrada slow; scammony offering at much lower rates without securing purchasers; Angostura tonquin beans easier. From America we hear that golden-seal root is rather lower, but serpentaria and senega are both firmer, and coca leaves are also rising in value. In chemicals the alterations are but few; quinine is again somewhat dearer, cream of tartar is steadier, and citric and tartaric acids are a turn higher. Sulphate of copper and quicksilver both lower. In heavy chemicals and dry-salteries we have to report an increase in the price of soda crystals and caustic soda. Higher prices have also been paid for shellac, East Indian indigo, quillaia, and henzol. In spices cut Cochin ginger, nutmegs, mace, and pimento are a trifle dearer, and the market for linseed, palm, and rape oil is also higher. On the other hand, there has been more or less decline in gambier, bleaching-powder, rough-cut ginger, long pepper, white Penang pepper, and turpentine. The gum Arabic auctions to-day showed very little alteration.

RECONSTRUCTION OF THE COMMERCIAL SALE-ROOMS.—At a meeting of the shareholders of the London Commercial Sale Rooms to be held to-morrow (Friday), a proposal, we understand, will be submitted for the reconstruction of the building. It is not anticipated that the assent will be withheld, as we believe that the directors, who are in favour of the scheme themselves, hold sufficient shares to control the decision. The new building, we hear, will cost 100,000*l.*, which is to be raised on debentures, and if the present plans are agreed to, it will take two and a half years to complete the work. The London Commercial Sale Rooms own the freehold of the whole building occupied by them between Mincing Lane and Mark Lane. The reconstruction will be begun at the Mark Lane end, and when it is so far advanced as to reach the part now used as meeting rooms, the subscribers will be temporarily accommodated in the rebuilt Mark Lane part. The rooms now in existence were established in 1811, and in the present reading-room a picture may be seen of the building as it then appeared, and which was substantially the same as it is now.

THE ALTERATION IN THE 'CHANGE HOUR agreed upon tentatively by the Gresham Committee commences from to-morrow, when no one will be allowed to enter 'Change between 3.15 and 4.15 p.m.

THE CHEMICAL UNION.—Ninety-four years ago the first alkali works in this country was established by Lord Dundonald, in conjunction with a few others, at Walker-on-the-Tyne, and five years before that time the first soda company had been formed in France by Nicholas Leblanc, the originator of the alkali process which bears his name, with

a capital of 200,000*l.*, found for him by the Duke of Orleans. The centenary of the great Frenchman's invention will, in all probability, witness the last struggle for existence of the combination of English Leblanc alkali works. The great Chemical Union which, during the process of its formation, has already seriously influenced the markets for heavy chemicals, has now at last been completed. A short time ago the committee under whose auspices the plan has been carried out proceeded to London to negotiate the financial part of the business with the firm of Rothschild, and this evening it is announced that the capital has been definitely fixed at 8,000,000*l.*, which the public will shortly be invited to subscribe. The promoters of the new Union, in a kind of semi-official *exposé* of their aims, state that their object is one of self-defence, and aims at obtaining a fair return on the capital invested. The idea that there will be a wholesale closing of works and dismissal of officials they declare groundless. Many works in the chief centres of production have been offered at very reasonable prices to the Union. A committee of eleven or twelve gentlemen has, through a sub-committee, visited these works on behalf of the promoters—the sub-committee including Messrs. James Tennant and J. E. Davidson, of Newcastle, Muspratt and Brock; whilst Mr. J. C. Stevenson, M.P., serves on the General Committee. The directors and managers will include the leading owners now in the Leblanc alkali trade. A large proportion of the capital will be subscribed by the present owners of the works to be included. The "middlemen" in the trade will not be interfered with, but there will possibly be less opportunity for the speculation which often takes place in chemicals; and manufacturers and users may be brought more in touch. The production of the Union will be: Bleaching-powder, 150,000 tons; caustic soda, 180,000 tons; other alkali, 300,000 tons per annum.

ACIDS.—*Carbolic* unaltered, but fairly steady. *Tartaric* slowly improving. The combination price remains unchanged, and in second-hand 1*s.* 2½*d.* to 1*s.* 2½*d.* per lb. has been paid here for foreign brands on the spot, while 1*s.* 2½*d.* per lb. is the price for forward delivery. English is held for 1*s.* 2½*d.* to 1*s.* 3*d.* per lb. *Citric* acid steady at 1*s.* 3½*d.* to 1*s.* 3½*d.* per lb. on the spot, and 1*s.* 4*d.* for forward delivery. *Oxalic* steady at 3½*d.* to 3½*d.* per lb.

AMMONIA SALTS.—*Sal ammoniac* has undergone no change, and offers at 37*s.* for first and 35*s.* per cwt. for second quality. *Carbonate* firm at 3½*d.* per lb. *Sulphate* steady at 11*l.* 12*s.* 6*d.* Beckton terms, 11*l.* 10*s.* London 24-per-cent. grey, and 11*l.* 7*s.* 6*d.* Hull and Leith.

ANISE.—No China star-anise is offering at present. The price is nominally 115*s.* per cwt.

BALSAMS.—It is said that ordinary grades of *Copaiba* are arriving in large quantities in New York, but the better qualities are by no means abundant. *Canada* balsam is quoted lower, at 1*s.* 2½*d.* per lb. c.i.f. for good quality in cases, and down to 1*s.* per lb. c.i.f. for barrels. *Peruvian*: the Hamburg speculation appears to have spent its force, and the market rules distinctly easier, 4*s.* 6*d.* per lb. c.i.f. is now the quotation.

BENZOL.—Decidedly dearer: 4*s.* 1*d.* to 4*s.* 3*d.* for 90-per-cent., and 3*s.* to 3*s.* 1½*d.* for 50-per-cent.

CALABAR BEANS.—There have been further sales in Liverpool at the recent decline to 5½*d.* per lb.

CAMPHOR (CRUDE).—The market is exceedingly quiet. The nearest spot quotation still remains 160*s.* for good Japan, and for June and July-August shipment some small transactions have been reported at 155*s.* c.i.f. terms. A shipment of 217 packages has been received from Japan, but all of it is believed to have gone to a firm of refiners.

CARDAMOMS have been in considerable demand, and there is very little offering on the spot. For good full pale *Mysore* 3*s.* 9*d.* has, we understand, been paid and more money is now wanted.

CASCARA SAGRADA.—The prices come easier again from America. New York, prompt shipment, 35*s.* c.i.f., and 32*s.* shipment per sailer from San Francisco; for September shipment from San Francisco an offer of 28*s.* c.i.f. has been refused, we hear.

CINCHONA.—This week's auctions were still smaller than those of July 29, the catalogues containing only:—

	Packages	Packages
Ceylon bark ..	492 of which	492 were sold
East Indian bark ..	73	53
South American bark	642	303
Total ..	1,207	848

With the exception of a large quantity of cultivated Bolivian Calisaya bark, there were no rich barks or any parcels of exceptionally fine appearance in the sales. There was a fair assortment of Succirubras from Ceylon, but yellow and grey cinchonas were very poorly represented. Two or three manufacturers did not bid at all, but among the rest there was a very good competition, and from the outset prices ruled decidedly higher. The lowest estimate of the advance is from 5 to 10 per cent., and we put the average unit price paid at 1½d. per lb., though at least one broker claims to have sold all the bark in his catalogue at 2d. per unit. The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	48,381
" American and Italian works ..	35,953
" Pelletier factory ..	29,752
" Frankfort o.M. and Stuttgart works ..	25,306
" Auerbach works ..	21,755
Sundry druggists, &c. ..	18,910
Total quantity sold ..	181,062
Bought in or withdrawn ..	30,310
Total weight of bark offered ..	211,372

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*, red varieties: Dull and weak to fair chips 2d. to 3d., a few good to bright quilly parcels 3½d. to 4½d., ordinary chips and shavings mixed 2d. to 2½d., fair to fine bright shavings 2½d. to 4d., ordinary dark and dusty to good strong root 2½d. to 6d. per lb. Ordinary weak grey shavings 2d. per lb. Yellow weak to fair stem chips and shavings 3d. to 4½d., ordinary weak Calisaya shavings 1½d., ditto chips 4d. Dusty root 7d. per lb. Hybrid stem chips 3½d. to 4d. per lb. *Renewed*, red varieties: Dull and weak to fair bright quilly chips 3d. to 5½d., good to fine bright shaving, 4d. to 6½d. per lb. Fair bright grey shavings 7d., ordinary weak Calisaya shavings 2½d. per lb. Fair quilly Hybrid stem chips 4½d. to 5d. per lb.

EAST INDIAN BARK.—*Original*: Fair to good bright quilly red chips and chips mixed with shavings 3d. to 3½d. per lb., ordinary dusty grey chips 4d. per lb. For some dusty but rich Officialis root an offer of 7½d. per lb. was refused. *Renewed*: Small and dusty to weak dull red branch chips 2½d. to 4d., good bright chips and shavings mixed 3½d. to 4d. per lb.

SOUTH AMERICAN BARK.—Of 474 packages cultivated Bolivian Calisaya, 297 (weighing about 44,664 lbs.) were sold at very full prices—7d. to 8d. for rather irregular and partly broken quill, and 10d. to 11d. per lb. for fine rich ditto. Chips were mostly bought in, 7½d. per lb. being wanted for some fine strong lots. Of *Cuprea* bark, imported about eight years ago, 162 serons are held for 2½d. per lb., and 6 serons, old and partly damaged, sold at 2d. to 3d. per lb.

The following are the exports from Ceylon between January 1 and July 17: 1890, 4,638,262 lbs.; 1889, 5,173,737 lbs.; 1888, 6,509,264 lbs.; 1887, 7,077,710 lbs. For the Amsterdam auctions on August 28, a total of 4,319 packages, weighing 375,304 kilos., has been declared. According to the analyses, there are a number of very rich parcels. One lot of 37 bales Ledger equalling 8.88 per cent. sulphate of quinine, another lot of 21 bales 8.08 per cent., two bales broken Ledger quill (Government bark) 8.72 per cent., and 22 bales ditto 8.82 per cent. Our imports for the week amount to 794 packages.

COLOCYNTH.—It is said that there has been a very good demand from America lately, where the drug is used as a

preservative against moths, a use to which, however, it has been applied for generations. Meanwhile holders have been able to obtain a little more money—viz., 1s. 3d. per lb. for fair Turkey apple.

COPPER (SULPHATE).—Lower, and offering at 17l. 10s. on the spot, 18l. for September to December, and 19l. for January to March.

CREAM OF TARTAR has been easier, and sold at 99s. 6d. for best French white crystals, but at the close the market is 1s. higher again.

CUTCH.—The market remains quiet but steady with small sales of MM in tablets at 29s. per cwt.

GALLS.—China galls are entirely neglected at 66s. 6d. to 70s. per cwt. nominally, and the last business we have heard of in Japan galls was about ten days ago, when 200 cases changed hands at 60s. per cwt. c.i.f. terms. In Bassorah galls there has been a fair business this week at 57s. for fair to 58s. per cwt. for good blues.

GAMBIER.—The market has declined, and sales are reported of good block on the spot at 26s. 6d., August-September at 26s. 4½d. down to 25s. 9d., July-August at 26s. 1½d. to 26s., and September-October at 25s. 10½d. per cwt. At the close the tendency is still drooping.

GUINEA GRAINS.—From Liverpool sales of 23 bags at 40s. to 40s. 3d. per cwt. are reported.

GUM ARABIC.—To-day's auctions were of moderate extent, the total quantity offered being 3,791 packages, of which nearly two-thirds consisted of Ghatti, Amrad, and Kurrachee gums. These were mostly held for high prices by the owners, and only a small portion sold, without much alteration in price, although good Ghatti and fine Kurrachee gums occasionally sold at a slight decline on the previous auction rates, while Ghatti pickings were rather dearer. Australian gum brought very full prices. The following rates were paid:—Ghatti, fine to very superior pale, 44s. to 61s.; ordinary dark and dull to fair brownish pale 20s. to 36s.; pickings from 5s. to 16s. 6d.; and siftings at 10s. 6d. to 16s. per cwt. Kurrachee, fine bold pale drop, 63s. 6d. to 65s.; good to fine ambery, 50s. to 60s.; common woody to fine red pickings, 10s. to 30s.; ditto siftings, 12s. to 29s. per cwt. Amrad, ordinary dark to good bright amber drop, 37s. to 45s.; fair glassy Madras, 30s. to 31s.; palish red scented Aden sorts, 26s. to 31s. 6d. per cwt. Australian, good brownish-red and glassy to fine frosted bold mixed red drop, 40s. to 49s. 6d.; ordinary dark drop, 20s. per cwt. West Coast African, ordinary dark to good bold bright red, 15s. to 25s. per cwt. Cape gum, soft ambery sorts, very dusty to good bold mixed, 57s. 6d. to 70s.; small to fine medium white tears, 87s. 6d. to 120s.; low brown glassy block, 5s. to 6s. 6d.

GUM GUAIACUM.—In Liverpool fair quality has been sold by auction at 1s. 3d. per lb.

HONEY.—Chilian has been in rather better demand at 31s. for fair up to 34s. per cwt. for good quality in Liverpool; new Californian shipment by sailer from San Francisco is offering at 34s. for prompt, and 35s. for September shipment.

INDIGO.—There continues to be an unusually good demand for East Indian indigo, and fully 600 chests have changed hands lately at higher rates, the average price paid being an advance of 3d. per lb. on the recent auction rates. The business has been mainly in Oude, Kurpah and Bengal varieties. The reports of the crop throughout British India are very unfavourable, and speak of serious damage to the crops through excessive rains, with the exception of the North-West Provinces, where prospects on the whole are moderately good.

JALAP.—The market is reported higher, and it is said that 1s. 8d. is asked for good Vera Cruz in London to-day, although from another quarter we hear that the same quality was purchased yesterday at 1s. 4d. The New York quotation is said now to be 1s. 7½d. c.i.f., but at the end of last month it was nominally 1s. 3d. c.i.f.

KOLA NUTS.—Prices are still advancing rapidly, and in Liverpool four bags, described as small wormy dried Kolas, have changed hands at 2s. 0½d. per lb. this week.

OIL (CASTOR).—The market remains quiet and rather devoid of demand. Liverpool quotes 4½d. to 4¾d. per lb.

for good Calcutta seconds, and 3½d. per lb. for first-pressure French oil. The Calcutta mail news states that stock and production of oil remain small, although the supply of Madras seed is increasing and prices are declining.

OILS (VARIOUS).—*Cocanut oil*: A quiet market at the following quotations: Fine Ceylon oil, in pipes, 28s. 9d. to 29s. 6d.; for hogsheads 30s. is asked; the c.i.f. quotation is rather lower, and business has been done at 32s. c.i.f. Mauritius oil nominal. *Cottonseed oil*: Unaltered, though crude on the spot is tending rather lower, at 18s. 3d.; Hull quotations, 17s. 4½d.; refined oil in London is worth 21s. to 22s.; Liverpool refined, 21s. 3d. to 21s. 9d.; and Hull naked, 19s. 1½d. to 19s. 3d. *Linseed oil*: Rather dearer at 23s. 9d. to 24s. 1½d.; Liverpool, in export casks, 25s. 6d.; and Hull naked, 23s. 1½d. to 23s. 3d. For *Olive oil* the London market remains at 39s. to 40s. for Spanish; 38s. 6d. to 39s. for Messina; and 34s. 3d. to 34s. 6d. for Mogadore oil; in Liverpool, however, there has been rather a better demand, especially for Seville oil, at 39s. to 40s. *Palm oil*: Searee, and fully 6d. dearer, fine Lagos being now held for 26s. to 26s. 6d. In Liverpool, the principal market for this article, there is very little offering, while the demand is exceedingly brisk; for soft oils 24s. has been paid, and holders will not go on at that rate. *Petroleum*: Fairly steady at 5½d. to 5½d. for American, and 5½d. to 5½d. for Russian oil. *Rape oil*: Very firm, and tending somewhat higher; brown, 28s. to 28s. 3d.; refined, 29s. 6d. to 29s. 9d. Liverpool reports a moderate demand; refined Stettin at 35s. 6d., and English refined at 32s. *Turpentine* considerably lower; American spirits are now offered on the spot at 30s. 10½d. per cwt.

OPIMUM.—The London market remains quiet, and retail sales are reported at slightly easier rates: Fine shipping opium up to 14s. 6d.; fine druggists' (hitherto held for 14s.), at 13s. 6d.; and seconds, at 11s. to 12s. per lb. The following report, dated July 31, has been received from Smyrna: During July the opium market has been quiet, with the exception of a slight rise during the early part of July, caused by speculative purchases of old tale quale opium. At that time the price for that variety was run up to 12s. 8d. per lb. f.o.b., but it has since receded again to 11s. 7d. per lb. f.o.b., and it is believed that the market will decline further to about 12s. 6d. to 12s. 9d. for new Yerli, 12s. to 12s. 3d. for new Karahissar, 11s. 6d. to 11s. 9d. for old Yerli tale quale, and 11s. to 11s. 3d. for old usual quality. A private letter from another source written a few days later tells us that the decline has made further progress, and that sales have been made of 14 cases old tale quale at equal to from 11s. 10d. to 11s. 2d. per lb. c.i.f. London, and of 20 cases new opium, with 2 per cent. loss in weight, at 12s. c.i.f. London. With regard to the crop, which had practically all been gathered in before the end of July, the estimates range from 4,500 to over 5,000 baskets. The quality, so far as can be judged, of the 300 baskets which have so far arrived at Smyrna, and of the arrivals at Constantinople, &c., is excellent, both as regards alkaloidal richness and appearance. It is again asserted that the Salonica crop has yielded fully 1,300 baskets (of which the weight, however, is less than of the Anatolian packages), while the districts of Bogaditz, Balukesser, &c., have given, 550, and Malatia, Tokat, Zilch, &c., about 1,200 baskets. These districts are mostly comparatively new ones, in which opium cultivation has only been commenced during the last fifteen years or so, the old districts being principally the highlands of Koniah, Karahissar, &c.

POTASH SALTS.—*Bichromate*: firm at 3½d. *Chlorate of Potash*: steady at 4½d. per lb. *Yellow prussiate*: both foreign and English firmly held at 9½d. per lb. German refined *salt petre* is worth 18s. 9d. to 19s.

QUICKSILVER lower and flat. The principal importers have reduced their price to 107. 5s. per bottle, and second-hand holders offer at 97. 19s.

QUILLAIA.—Business has been done in Liverpool at 167. 5s. to 167. 10s. per ton.

QUININE has been flat in the early part of the week, but since yesterday a good demand has cropped up and prices are rather higher. Altogether about 60,000 ounces are reported sold, all in second-hand: *German* on the spot at 1s. 0¾d. to 1s. 1d., November-December at 1s. 1½d., and February-March at 1s. 2d. per oz.

SCAMMONY.—The stock of *Root*, which a short time ago was still worth 56s. per cwt, is now accumulating, and 40s. per cwt. is the nominal price for fair quality, but there are no buyers at that figure. It is said that the American buyers have secured large contracts for resin at low prices. For new virgin scammony 30s. per lb. is asked, but 28s. per lb. would be taken.

SHELLAC.—Early in the week the market ruled rather dull, and very little business was done. At the auctions on Tuesday 521 cases were offered, but only 56 of these sold at steady prices; ordinary livery to good bright worked second orange, 89s. to 93s.; ordinary red unworked, 88s. to 89s. per cwt. Since the auctions the market has shown rather more animation, and several hundred cases have been sold at the call at full prices. The following were the quotations at to-day's call:—

		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Orange TN, sellers	..	96/	95/	97/	97/6	98/	99/
" buyers	..	93 6	94 6	96/	96 6	97/8	97/

Garnet AC nominal, sellers at 93/6, buyers at 90/

Later in the day more business was done, TN for September delivery at 95s. 6d., October 96s. 6d., and December 97s. 6d. per cwt.

SODA SALTS.—*Bicarbonate* firmly held, at 6l. 5s. to 6l. 10s. for kegs, and 5l. 15s. to 5l. 17s. 6d. for casks from the warehouse. *Bichromate*, 2½d. per lb. *Caustic soda*: 70-per-cent. on the spot, 10l. 7s. 6d. to 10s. 10s. The combination price for October to December has been fixed this afternoon at 10l. 5s., free on board. *Crystals* higher, at 65s. ex ship. *Nitrate* steady, at 8s. 4½d. to 8s. 10½d., according to quality.

SPICES.—The market generally remains languid, and at the auctions held on Wednesday only a small proportion of the supply offered was sold. *Arrowroot*: quiet. *Cinnamon chips*: badly damaged ordinary Ceylon sold at 1½d. per lb. *Cassia lignea* remains very dull at 20s. 6d. to 21s. per cwt. *Cloves* have been steady, and sold on the spot for Zanzibars at 5½d., and brisk business has been done at 5½d. to 5½d. for Aug.-Oct. and 5½d. for Jan.-March delivery. At the auctions 298 bales were offered, but all bought in at from 5½d. to 6d. per lb. for ordinary dark to fine bright; unpicked Penang cloves were also bought in at 7½d. per lb. *Ginger* slow of sale and rather easier for rough Cochinchina, which realised 17s. 6d. to 19s. for small to boldish washed; native-cut slightly dearer, 25s. 6d. to 26s. 6d. for medium to bold dull; of Jamaica about 50 barrels were sold at 62s. to 68s. for common to fair ordinary lean; and 70s. for medium rather lean. *Mace* brings steady prices: common to fair red, 2s. 1d. to 2s. 5d.; West Indian, fair to fine pale, 2s. 3d. to 2s. 10d.; wild Bombay, 1s. to 1s. 3d. for good to fine bright pale. *Nutmegs*: a fair demand at high prices; West India, good to fine (72 to 62), 3s. to 3s. 7d.; (116 to 120) 2s. 8d. per lb. *Black pepper*: on the spot sales have been made at 5½d. per lb.; at the auction nearly 1,400 bags were mostly bought in. *White pepper* has been firm until the latter part of the week, when prices declined for forward delivery of Penang; at the auction 6½d. to 6½d. was paid for fair Penang, while Singapore without reserve brought 9½d. to 9½d. for fair to good bold. *Long pepper*: again lower, and selling at 20s. per cwt. *Pimento*: in good demand and dearer; dark to good clean, 2½d. to 3½d. per lb.

TEA.—The market has had a surfeit of all kinds of tea this week, and prices are lower almost all round. On Tuesday a heavy Congou sale went off very irregularly, good liquoring N.S. siftings selling at 4d., and fine quality Moning siftings at 4½d. to 4½d. N.S. common tarry lying sold as low as 4½d., and N.S. Saryune at 5½d., while some bargains in N.S. Moning were knocked down between 6½d. and 7½d. These teas are tolerably safe to buy, as we are not likely to see teas like these lower this side of November. Fine Moning teas are being held back, the quantity being manageable, but most of the fine Soomoos have now changed hands at prices from 1s. 5d. for Uue Hiong chop, and 1s. 4d. for Cheang Mow, downwards. *Assams* are easier, and fair common Souehong and Pekoe Souehong may be had from 7½d. to 8d., with Pekoes from 8½d. upwards. Some very useful N.S. Broken Pekoes may be had from 1s. to 1s. 4d., and these should infuse rather more life into the Irish trade. Tuesday's *Ceylon* sale was exceedingly heavy, and with the

small breaks lasted nearly five hours. Generally speaking, prices were maintained, but, as was inevitable, they became irregular as the afternoon went on, and some very cheap lots were to be picked up here and there. Common leaf tea fetches 8*d.*, but good liquoring Pekoo Soucbong and Pekoe at 9*d.* to 10*d.* is worth attention, and some of the thick liquoring semi-broken Pekoes from 1*s.* to 1*s.* 3*d.* are invaluable for a blend.

TONQUIN BEANS.—Towards the end of July, 15 tons of *Angostura* beans arrived in New York, and further quantities were expected; this has brought prices down, and offers are now in the market at 5*s.* 6*d.* per lb. c.i.f., although in some quarters here 6*s.* 6*d.* c.i.f. is still quoted. Nothing is known of any *Pará* beans coming forward as yet.

TURMERIC.—The market remains quiet, and at the dry-saltary auctions on Tuesday, 13 bags *Bengal* sold at 13*s.* 6*d.*

CHEMICALS IN THE NORTH OF ENGLAND.

THE chemical market during the past week has continued firm in tone, and, with the exception of *Bleaching-powder*, prices have been fully maintained, *Soda crystals* especially having advanced in price.

THE CHEMICAL UNION is now generally accepted in chemical centres as being practically accomplished, with the exception of raising the funds, and it is not anticipated that there will be any difficulty in subscribing the necessary capital. It is expected that the prospectus of the company will be issued early next month. The restriction placed upon makers not to sell their products beyond the end of next month has been removed, and manufacturers are now in the market with quotations for deliveries over the remainder of this and the whole of next year. The price of soda crystals from October 1 to end of this year has been fixed at 56*s.* 6*d.* per ton; sulphate of soda, 35*s.* per ton; chlorate of potash, 5½*d.* per lb.; bleaching-powder, 6*l.* per ton; and soda ash, 1½*d.*, less 5 per cent. For delivery over 1891 higher prices are asked. It will be seen that the price of bleach has not been put up much, and is considerably lower than when the Bleach Association controlled the output. Soda products remain at about the market prices of the day.

THE SULPHUR RECOVERY PLANT of the Newcastle Chemical Works Company is now in partial operation, and they are turning out the various kinds of sulphur produced by the Chance sulphur recovery process—viz., rock, roll, and flowers.

SULPHATE OF COPPER.—Market quiet for prompt at about 18*l.* per ton, less 5 per cent. discount, f.o.b. Liverpool. For delivery early next year 19*l.* to 20*l.* per ton. asked.

SULPHATE OF SODA quiet at the moment, and prices range from 30*s.* to 32*s.* 6*d.* per ton in bulk on rails, Widnes and St. Helen's; 30*s.* per ton in bulk, and 41*s.* to 42*s.* per ton ground and packed in casks for export, f.o.b. Tyne.

BICARBONATE OF SODA.—Market steady and price firm, without change, at 5*l.* 15*s.* per ton, less 2½ per cent. discount, in 1-cwt. kegs, f.o.b. Liverpool, and proportionate allowance for larger packages.

BLEACHING-POWDER at the moment is flat and weak, and prices have receded since last week. For prompt delivery quotations are: 5*l.* 2*s.* 6*d.* to 5*l.* 5*s.* per ton in softwood casks, on rails at Widnes and St. Helen's; and 5*l.* 12*s.* 6*d.* to 5*l.* 15*s.* per ton in hardwood casks, f.o.b. Liverpool, both less 2½ per cent. discount. Glasgow quotations: 5*l.* 5*s.* to 5*l.* 10*s.* per ton on rails. Tyne market easier, at 5*l.* 2*s.* 6*d.* to 5*l.* 5*s.* per ton in softwood casks, according to brand; 5*l.* 7*s.* 6*d.* to 5*l.* 10*s.* per ton in hardwood casks, f.o.b. Tyne. For delivery ex ship Thames, price is 5*l.* 12*s.* 6*d.* to 5*l.* 15*s.* per ton. If packed in 1, 1½, or 3-cwt. barrels, the usual extras of 20*s.*, 15*s.*, and 5*s.* per ton respectively charged in addition to ordinary quotation.

CREAM CAUSTIC firm at 8*l.* 2*s.* 6*d.* to 8*l.* 5*s.* per ton on rails, and 8*l.* 7*s.* 6*d.* to 8*l.* 10*s.* per ton, f.o.b. Liverpool, less 2½ per cent. discount.

CAUSTIC SODA.—Market continues steady and prices firm. For spot and until end of next month quotations are 9*l.* per ton for 60-per-cent. white; 10*l.* per ton for 70-per-cent., or might be shaded a little by dealers; and 10*l.* 17*s.* 6*d.* to 11*l.* per ton for 74-per-cent., all f.o.b. Liverpool, and less 2½ per cent. discount. 77-per-cent. white unchanged in price, at 10*l.* 10*s.* per ton for solid in drums, and 13*l.* 10*s.* per ton for ground, packed in 3 to 4-cwt. barrels, f.o.b. Tyne, net cash.

CHLORATE OF POTASH.—Market slightly easier, and prices range from 4½*d.* to 5*d.* per lb., less 5 per cent. discount, at usual ports of shipment.

HYPOSULPHITE OF SODA scarce, and price firm, with difficulty in getting prompt deliveries. Quotations are 5*l.* 5*s.* per ton in casks, and 5*l.* 15*s.* per ton in kegs, less 2½ per cent. discount, f.o.b. Tyne; and 6*l.* per ton in casks, and 6*l.* 10*s.* per ton in kegs, less 2½ per cent. discount, delivered Manchester and Liverpool.

SODA ASH continues steady, without any alteration in price. *Caustic* quoted 1½*d.* per degree, and *Carbonated* 1½*d.* to 1½*d.* per degree, less 2½ per cent. discount, f.o.b. Liverpool; and Newcastle carbonated makes at 1½*d.* per degree, less 5 to 6 per cent. discount, f.o.b. Tyne.

SODA CRYSTALS have had a steady advance in price on Tyneside, and market keeps firm. For prompt delivery makers quote 56*s.* per ton in casks, gross weight; 56*s.* per ton in 2-cwt. bags, net weight; 58*s.* 6*d.* per ton in 1-cwt. bags, net weight, f.o.b. Tyne. For delivery ex ship Thames price is 63*s.* to 64*s.* per ton. Liverpool market firm, at 3*l.* to 3*l.* 2*s.* 6*d.* per ton on rails, and 3*l.* 5*s.* to 3*l.* 7*s.* 6*d.* per ton f.o.b. Liverpool, less 2½ per cent. discount, and packed in barrels containing 3 cwt. each, net weight.

THE DUTCH MARKET.

AMSTERDAM, August 13.

THE Amsterdam cinchona sales on August 28 will consist of 4,219 bales and 102 cases, or about 367 tons Java bark—viz., from Government plantations, 630 bales 48 cases, about 62 tons; from private plantations, 3,589 bales 54 cases, about 307 tons. This bark may be classified as follows:—*Druggists' bark*: *Succirubra* quills, 92 cases; broken quills and chips, 442 bales; root, 122 bales; *C. Sebuhkrafft* quills, 10 cases. *Manufacturing bark*: *Officialis* broken quills and chips, 40 bales; *Ledgeriana* broken quills and chips, 2,735 bales; root, 749 bales. Hybrid broken quills and chips, 131 bales.—4,219 bales 102 cases.

THE TRADE IN ZANZIBAR CLOVES.

A MEETING of the trade interested in forward contracts for Zanzibar cloves was held on Monday last at the Commercial Sale Rooms, Mincing Lane. During the last two or three years the trade in that article for forward delivery has enormously developed, and disputes frequently arise from the absence of definite rules and uniform clauses in the contracts. Mr. Hendrie (Donald Gray & Sons) presided, and about fifteen gentlemen were present, mostly brokers.

Mr. HENDRIE said the meeting had been called to consider certain questions arising out of arrival and delivery contracts, which had cropped up lately amongst the selling and buying brokers. Those who called the meeting would like to see a representative committee appointed from amongst the brokers, so as to arrive at a conclusion satisfactory to importers and buyers, and induce the Brokers' Association to cause certain definite clauses to be entered in the contracts.

Mr. WALTON complained that frequently when cloves were sold for delivery three months hence, they were almost immediately tendered in fulfilment of delivery contract, a circumstance which kept a great many firms from trading in delivery cloves, owing to the loss of weight thereby in-

curred. He also believed that bills of lading had been antedated; and one particular steamship line was especially notorious for conniving at this. Consequently cloves were left lying on the quay at Zanzibar, and buyers were responsible in case they were destroyed. He supported the proposal of a committee of some of the leading brokers in the trade.

Mr. FIGGIS thought that as brokers it would be rather dangerous for them to do anything that would drive away business to other markets just because they had difficulties regarding c.i.f. terms. It would be a pity to single out an article like cloves, and to say that that particular article should not be dealt in on c.i.f. terms. A great many of the difficulties which Mr. Walton had pointed out were such as might have been anticipated, and he considered the difficulties had been far less, in proportion to the business done, than there had been reason to expect. The very clauses in their bills of lading which some of them objected to occurred in the Singapore bills of lading at that moment. They could not get the shipping companies to bring the goods without the clause relating to negligence. That clause was inserted purely for the sake of the underwriters, and the merchants connected with Singapore insured themselves against that clause, so that they incurred no risk. In a particular case referred to he thought the probabilities were that the merchants and buyers had not been insured as they should have been. In all probability the ship would pay. He believed that was the first instance which had occurred during many years of selling on c.i.f. terms. Was that one case sufficient reason for throwing over the c.i.f. terms? As to antedating bills of lading, no one would excuse that practice. He did not think that any buyer had suffered any real loss as yet. The man who was more likely to lose was the broker or the merchant who had accepted the bill. His firm had made contracts lately for June July shipment, but they had inserted a proviso extending the shipment not later than the end of the first seven days in the following month. As to the fact of cloves being landed to-morrow and tendered three months hence, he did not think that was any grievance to the buyer, but there did exist a great grievance to some of the buyers of cloves for forward delivery with regard to the weights. A new contract had been agreed upon for the delivery of shellac, in which that the 20th day of the last month on which the goods were sold for delivery was to be the last day of that month for the tendering of the same, and that subsequent sellers had until the 25th day of the month named to deliver. Some clause of that kind they would settle the grievances of the buyers of cloves. He hoped they would not do anything to destroy business on c.i.f. terms. A definite time should be fixed for tendering, and if tenders were received after that time they should only reckon as from the next day.

Mr. HENDRIE said that the allegations as to the antedating of bills of lading had impressed him with their seriousness. He had a case himself in which the bill of lading was dated March 3, and the cloves did not leave Zanzibar until the beginning of May, and he was at a loss to know at whose risk they lay at that port in the meantime. He made inquiries of the shipping company, and they told him they had no responsibility at all. They were therefore lying at Zanzibar the whole of that time solely at his risk. He thought a great deal more of the matter than Mr. Figgis appeared to, and he hoped it would be put a stop to.

A committee, consisting of Messrs. Hendrie, Vanhouse, Young, A. Devitt, Taplin, Walton, and H. Barber, was then appointed to investigate the question and submit resolutions to another meeting prior to their being placed before the Brokers' Association.

REMEDY FOR ANTS.—A correspondent of the *Scientific American* states that powdered corrosive sublimate strewed sparingly on the ground about the trails of the ants exterminates them speedily. Rather a dangerous remedy considering its poisonous nature.

A MUSTARD-PLASTER which will not cause a blister to form can be made by mixing the mustard with the white of an egg instead of water. The plaster is just as efficacious in drawing the blood to the surface, and the patient is not annoyed while waiting for a blister to heal. If the mustard is too strong, add flour.

LONDON DRUG STATISTICS.

The following figures refer to the stocks of drugs in the port of London on July 31, 1890, and to the imports and deliveries during the first seven months of 1890.

Article	Stocks		Imported		Delivered	
	1890	1889	1890	1889	1890	1889
Aloes ..os & pkgs	9,256	7,048	4,323	2,328	3,308	2,269
" ..gourds	916	1,598	74	195	502	643
Anise, Star ..chts	55	84	14	40	30	95
Arrowroot ..cks	11,755	14,737	10,355	11,426	9,811	7,555
" ..bxs & tins	3,084	6,198	244	1,695	3,254	2,737
Balsams ..cks, &c.	2,493	2,493	534	91	533	243
Bark (Cinchona), S.American cases	403	483	3	9	62	32
" ..hls, &c.	27,703	34,391	4,996	6,887	9,073	6,769
E.I., Ceylon, and Java ..cks	447	677	355	927	308	846
" ..bils, &c.	26,437	27,443	28,665	35,194	26,303	29,153
Borax ..cks	351	557	21	6	147	37
Calumha ..	1,317	1,578	192	310	79	575
Camphor ..	5,230	449	9,708	1,346	4,511	1,974
Cardamoms ..chts	1,365	1,602	2,041	2,425	2,021	1,403
Coco. Ind. hgs, &c.	537	286	701	94	336	157
Cream of Tartar ..cks	14	11	58	14	54	16
Cubebs ..cks	64	59	71	255	316	320
Dragons' Blood ..chts	129	182	110	162	125	60
Galls, China, &c. os	4,152	1,699	4,835	1,843	1,702	2,359
Markey &c. ..bgs	7,021	6,274	7,000	7,652	3,717	4,035
Gums—						
Ammoniac ..pkgs	66	117	6	6	31	14
Animi & Copal ..pkgs	6,258	5,037	4,638	4,786	7,933	4,714
Arabic ..	19,734	24,734	15,641	20,949	17,675	15,756
Asafetida ..	419	188	217	823	169	583
Benzoin ..	2,328	2,018	2,126	1,852	1,891	1,721
Damar ..	7,553	3,332	6,689	4,639	4,511	3,838
Galbanum ..	34	7	24	7	21	—
Gamboge ..	80	92	180	171	163	172
Guaiacum ..	19	11	33	101	33	103
Kino ..	10	104	7	37	74	20
Kowrie ..	812	1,410	1,223	1,723	1,715	1,683
Mastic ..pkgs	14	43	2	26	15	14
Myrrh ..	444	498	316	216	320	263
Olibanum ..	6,551	5,612	7,409	7,583	4,604	4,684
Sandarac ..	599	806	1,183	700	871	651
Tragacanth ..	7,105	9,672	4,164	7,910	4,439	3,975
Ipecac. ..cks & hgs	222	365	839	831	809	494
Jalap ..	104	70	62	—	29	17
Lac Dye ..chts	5,430	5,754	—	—	269	126
Nux Vomica ..pkgs	833	432	4,075	485	3,710	1,171
Oils—						
*Anise ..	24	93	65	209	134	125
*Cassia ..	6	133	280	228	304	142
Castor ..cks	2,300	457	1,025	358	1,036	466
" ..os	2,694	3,081	4,055	2,579	4,615	6,506
Cocoa-nut ..tns	1,021	2,331	2,347	3,159	3,939	2,220
Olive ..cks, &c.	1,475	856	4,612	2,791	3,918	2,295
Palm ..	10	35	31	57	40	82
Opium ..chts, &c.	+	1,312	+	403	+	703
Plumbago ..	1,232	580	2,153	2,405	1,511	2,257
Rhubarb ..chts	661	838	711	688	893	853
Safflower ..hls, &c.	387	538	93	32	163	14
Sarsaparilla ..bils	256	323	766	791	768	851
Senna ..	2,268	1,123	2,491	802	3,380	1,577
Shellac, Orange ..chts, &c.	36,890	46,525	15,474	13,530	19,414	13,729
Garnet ..	7,468	15,919	3,940	6,266	6,364	4,516
Buttong ..	4,893	6,631	4,477	3,936	5,742	5,107
Total ..chts ..	49,253	63,105	23,891	23,732	31,520	24,392
Sticklac ..chts, &c.	2,381	3,779	20	90	715	937
Gambler ..	735	289	5,460	4,743	5,420	5,613
Guth ..	2,497	3,375	593	2,757	1,104	2,644
Turmeric, Bengal ..tns	1,107	1,412	15	235	303	305
Madras, Ceylon, &c. ..tns	895	1,381	161	40	422	404
Total ..	2,002	2,793	173	275	725	709
Vermilion, ..chts, &c.	36	16	112	94	95	94
Wax, bees' ..bils & ..cks	1,422	28	2,741	287	2,093	535
" ..cks & ..caks	1,372	1,037	1,696	2,050	1,280	2,032
" ..	41	112	68	201	51	104
" ..Japan ..pkgs	1,567	907	481	284	559	828

* The stocks of oils of anise and cassia at Smith's warehouse and Brewer's quay, the principal storage places for these articles, are kept secret.

† No returns of any value can be given regarding the present stock of opium, as the firm in whose warehouse the bulk of this drug is stored decline to furnish information.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

The Irish Pharmacy Bill.

An *Irish Chemist* (114/22), referring to Mr. Brunker's letter in our issue of August 9, regarding clause 19, says, that Mr. Brunker may perhaps employ only assistants who have passed the qualifying examination of the Pharmaceutical Society, but there are many also having good assistants in every respect competent, but not examined, to whom the proposed qualifications for assistants will be an important convenience. It will rest with the Council to make the examination an adequate test, and perhaps they may ensure by it a high standard of qualification.

Mr. R. J. Downes, of 136 Lower Baginbun Street, Dublin, writing in regard to the assistants' qualification clause, says, "As to the objection that it is opposed to the principle of the Act, it is true that none but licentiates are competent under it, but we must recognise the facts that the assistant does not rank in responsibility with the principal, and that the major part of the dispensing work is at present done by uncertified, but it is believed 'competent' assistants. The Council at present require aspirants for the licence to have four years' experience in practical dispensing before they present themselves for the licence examination, and before this Bill was brought in they applied to the Privy Council for licence to hold such an examination as is contemplated in the 19th clause, so that instead of the standard of the dispenser being lowered, or risk to the public increased, the contrary must be the case.

"As to the *raisons d'être* suggested—viz., its effect on the grinders' mill, and a supply of cheap assistants—if they are able to live thereby, we won't grudge the millers the reward of honest labour, and the assistant with the Society's certificate in his pocket will certainly be worth more than the one without it, and he is certain to know it, and very unlikely to take less.

"During the 1888 attempt it was remarked to me that one of the promoters then in London had lost the only licentiate he employed, and had not replaced him; of the remaining assistants none had even an assistant's certificate. How were the public served, and what about their safety?

"For my part I think this one clause worth all the trouble the Council have had, and I think the conclusion of the contest justifies the position which I took at the general meeting of the Society, all my suggestions having been adopted."

[Mr. Downes succeeds in saying in little defence of the clause. The point is that it is asked in it to get the Legislature to say, in effect, that persons who are not competent to pass the licence examination are competent to perform all the duties of those who hold licences. We repeat that this is a dangerous principle, and that it is an entire contradiction of the principle of the Irish Pharmacy Act, as well as the British. Apart from that the motive is bad. What the promoters desire is a supply of assistants of whom they will be able to say, "They are examined and certificated men," thus getting customers to believe that the man is as good as his master. This is smart, doubtless, but not quite

the thing that we would expect of those who have the administration of an Act of Parliament. Necessarily the certificate for assistants will place the licence at a discount (hence cheap assistants), and in the long run the latter will be sought for only when a man wishes to go into business. Carried out to its logical conclusion the issue will be that certificated assistants will become so numerous, and licentiates so few, that the former will seek to make their qualification the statutory one for those who shall keep open shop.—ED. C. & D.]

B.P. Syntax.

SIR,—In reply to "Nescio" I think the P.B. correct in using the singular verb. I read it with [a quantity weighing] 84 grains, &c. WILTS. (111/35.)

A Peculiar Minor Question.

SIR,—Mr. Druce, in asking "What is the peculiarity of tincture of stramonium?" probably had in view the peculiar greenish fluorescence exhibited by the recently-prepared tincture, which is indeed most striking. The fluorescence gradually disappears, and after about four months is scarcely noticeable. The extract left on evaporation of the tincture yields the fluorescent body to dilute acid, and chloroform does not remove it from the acid solution. I am not aware if the chemical nature of the fluorescent body has been ascertained, but in "Pharmacographia" a reference is made to its presence in stramonium seeds. I am, Sir,

August 11. STRAMONIUM. (112/4.)

[Other replies to the same effect have been received. Fluorescent substances are found in several solanaceous plants. Dunstan and Chaston have found one in the root of *Scopolia carniolica*, identical with another, scopoletin, which Eykman obtained from *Scopolia japonica*; and Kunz has obtained the fluorescent chrysotropic acid from *Atropa belladonna*.—ED. C. & D.]

The Metric System in Dispensing.

Our reporter appears to have misunderstood Mr. Martindale's remarks at the Council meeting last week re the metric system in dispensing. Mr. Martindale is averse to the continental system of dispensing liquids by weighing them, but would like to see the metric system of measuring liquids and weighing solids introduced into this country for dispensing purposes.

The Poor 'Pothecary.

Tutor et Ultor (111/34) sends us a long letter, bristling with classic and Latin quotations, in which he informs "the craft" that "it is a matter of ultra importance that chemists should immediately organise and combine in order to put down monopoly, as well as to protect themselves from the oft-recurring vexatious proceedings to which they are subjected by those who pose as their natural and hereditary enemies and their not over-sapient advisers.

"For the purpose in view, he would advocate the formation of an association comprising the entire body of chemists upon the register, with the avowed object of placing a resolution before Parliament, franked by a monster public petition, praying that the penal clause of the Apothecaries Act be repealed in so far as it relates to the action of duly qualified chemists prescribing upon their own premises; because public necessity and requirements demand it, and by their education and training, chemists are sent forth certificated according to British law as qualified to pronounce an opinion upon the nature, method of preparing doses and uses of drugs and pharmaceutical products." "Tutor et Ultor" "does not advocate the formation of any milk-and-water society, but the commixture of a resolute band of workers, pledged to accomplish, *vi et legibus* and shoulder to shoulder, their emancipation from the thralldom of foes who are as merciless as they are ungenerous."

This is the pith of the letter, but if there are any who wish to follow up the matter, we must ask them to spare us the invective. The Apothecaries' Society is not a roaring lion.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

A German Prescription.

108/57. *El Tob.*—The translation of your [German prescription is:—

Tr. ferr. compos. (Athenstedt) .. 180·0 grammes
Half to one liquor-glassful three times a day.

We do not know the formula for the tincture. Perhaps some German reader will communicate it, or particulars regarding it.

112/38. *A. H.*—*Tinctura Quininae Composita*.—This is the plain tincture of quinine, not the ammoniated tincture.

112/54. *Apprentice*.—You dispensed the mixture correctly. The precipitate is due to the fluid extract of damiana.

Doctor versus Chemist.

109/7. *Deposit* sends us the following:—

Ferri et quin. cit.	..	..	..	3ij.
Potass. bromid.	..	..	..	3iv.
Ac. hydrocyan. dil.	..	..	..	3iss.
Spt. ammon. arom.	..	..	..	3iv.
Tr. zingib. fort.	..	..	..	3ij.
Inf. cinchonæ	..	..	..	ij.
Aq. menth. pip. ad	..	..	..	3vj.

M.

He obtained a dirty-green muddy mixture, which in the course of a few hours gave a dense blackish deposit, which he considers consists of tannate of iron and quinine. He dissolved the ferri et quin. cit. and pot. brom. in aq. menth. pip., added tr. zingib., infus. cinchonæ, and ac. hydrocyan. dil., then spt. ammon. arom. The doctor told the patient that it should be green, and there should be no deposit. It had been previously sent out by another chemist as a green clear mixture.

[We imagine that the first chemist must have filtered it before sending out, because if dispensed otherwise it gives the result obtained by "Deposit." By filtering, part of the quinine and other cinchona principles is lost. When filtered a green solution is obtained (brighter rather when the old infusion is used) which, on the addition of liq. ammoniæ, or a further quantity of spt. ammon. arom., gives a whitish precipitate soluble in ether, while the aqueous portion assumes the appearance of a weak solution of citrate of iron. By adding the spt. ammon. arom. and tr. zingib. fort. mixed last, and by degrees, shaking each time, the deposit is reduced to a minimum; the whole of the quinine is not deposited, however. We fail to get a black deposit, and imagine that the old inf. cinchon. has been used, or that the aq. menth. pip. has been made with magn. carb. "Deposit" should advise the doctor of what the precipitate consists, and the consequent weakening of the mixture, drawing his attention to the tests given in B.P. under ferri et quin. cit. to corroborate the statement, but at the same time offer to filter it if he wish it. It may be a case where the appearance may have as much effect as anything else.—Ed. *C. & D.*]

LEGAL QUERIES.

112/50. *Pharmakos*.—(1) The new Weights and Measures Act does not specifically require the stamping to be done by the inspector in your own district; but stamping does not mean freedom from inspection. (2) It is necessary to have all weights stamped, whether used for dispensing or retailing. Dispensing-scales must also be stamped.

113/57. *Lincolnshire*.—In a case similar to what you state, the General Medical Council have removed the name of a dentist from the register. See this journal May 10, page 624.

112/40. *Moneo*.—If a grocer go into partnership with a chemist and druggist for the purpose of carrying on a pharmacy, there are several directions in which he (the grocer) may render himself liable. First, in regard to sale of poisons—whether that is done by the chemist or by a qualified assistant does not matter, the fact remains that the grocer takes his share of the profits, and that has been proved to be the equivalent of "selling." If the title "chemist and druggist" is used in connection with the business, the grocer will be liable under the section prohibiting the use of the title by unregistered persons. If the name of the grocer is not used in connection with the business, it remains for the Registrar under the Pharmacy Act to discover and prove the partnership.

114/7. *Justice*.—In such cases as yours the Pharmacy Act provided an outlet—viz., the modified examination. If the legislature had intended that all those who sold poisons before the Pharmacy Act should be registered as chemists and druggists, there would have been no necessity for instituting a special means for the registration of assistants. Mr. Walker, and those who think with him, overlook that fact, but a court of law would not.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

103/70. *Indegator*.—*Dry Soap*.—February 22, 1888, page 269.

112/3. *S. & P.*—*Dispensers in Royal Navy*.—See issue of September 21, 1889.

107/70. *Aqua*.—A rough, but on the whole satisfactory test for **Organic Impurities in Water** is to acidulate an ounce of it with 5 drops of dilute sulphuric acid, and add from 5 to 10 drops of liq. potassii permang., B.P. The colour, should not be discharged if the water is potable.

106/57. *Limonis*.—*Lemonade*.—The following is the syrup used by aerated-water manufacturers:—

Soluble essence of lemon	..	..	1½ oz.
Citric acid	..	..	2½ "
Plain syrup	..	..	1 gallon

Dissolve the acid in 6 oz. of water, mix with the syrup, and add the essence.

One and a half ounce of this syrup is sufficient for a bottle.

104/1. *Walton*.—You are quite right about the Quinine and Iron Tonic. Read it:—

Syr. Easton	..	..	..	3j.
Syr. simp.	..	..	..	3ss.
Tr. calamb.	..	..	..	3ij.
Spt. chlorof.	..	..	..	ij.
Aquam. ad	..	..	..	vj.

M. 3ss t. d. e.

104/45. *J. A. S.*—(1) A Cement for mending china, &c.—Take isinglass, soak in water until swollen and soft, then dissolve in French brandy, rum, or weak spirit, so as to form a strong glue. In every 2 oz. of this dissolve two small pieces of galbanum or ammoniacum by trituration, then dissolve about 40 grs. of mastic in S.V.R. q.s.; mix with the isinglass solution by means of a gentle heat, keep closely corked, and when used immerse the phial in hot water. This is said to resist moisture. (2) For an embrocation such as you want, see DIARIES 1889 and 1890, or issue of May 3, 1890.

108/7. *Dens.*—(1) Solution for Blueing Gun-barrels.—Liq. antim. chlor. B.P. (2) To remove Tartar from the teeth.—Let the teeth be first scaled, then give either powdered pumice stone or cuttle-fish bone, alone or mixed with any of your stock tooth-powders (3ij. to 5vj.).

106/24. *Juan.*—(1) Teething-powders for children, good, tried, and reliable, see September 28, 1889, page 480. (2) To improve the appearance and prevent fermentation in the Whooping-cough Mixture given some time since, use ext. valerian. fluid. and either glycerine or S.V.R. in place of half the water.

109/52. *White.*—Tripe is whitened with milk of lime.

109/46. *X. Y. Z.*—Roscoe & Schorlemmer's volumes on inorganic chemistry are the books to be read for South Kensington honours, and you should keep yourself well posted on current literature. Read also Mayer's "Modern Chemical Theories," as translated by Bedson.

110/22. *Apprentice and Bromidia.*—Bromidia is a sedative compound made by the Battle Chemical Company. You will find the dose stated on the label.

108/17. *Saponis.*—Watt's "Art of Soap-making" (Lockwood) and Cameron's "Soaps and Candles" (Churchill) are reliable books, either of which you may consult. Silicate of soda is used for hardening the soap.

108/20. *C. B. S.*—(1) How can we possibly say? (2) By trade-mark. See DIARY for particulars.

108/7. *Omnia.*—Essences of Musk and Ambergris prepared by the alkaline method, contain a little carbonate of potash. About 10 grains to the pint is sufficient.

108/67. *W. Goodman.*—Refer to the advertisements in our Summer issue.

108/61. *Rhizome.*—Spirit is recovered from ginger marc by distillation or hydraulic pressure. For a retail druggist the "Enterprise" press is most useful. You will find it cheaper to buy essence of ginger.

108/36. *Carlisle* asks: (1) Why lemonade-bottles should be kept on their sides? Because the corks are kept moist, and so keep the bottles perfectly closed. (2) What is an alkaloid? An organic base (containing nitrogen) capable of combining with acids to form salts. That is all we can say in the space to spare.

108/32. *J. W. Petrie.*—Begbie's "Medical Information and Advice" (Nelson, 2s. 6d.) is a good book of domestic medicine.

108/31. *Rats.*—The best Rat-lurers are mixtures of essential oils, such as the factitious oil of rhodium. Try a mixture of oil of anise, oil of cassia, and oil of bay.

108/35. *Cinnamon.*—(1) The addition of a little borax would make the preparation all right. (2) The Fever-powders are nitrate of potash with powdered cochineal. (3) You will find plenty of formulæ for antiseptic tooth-powders in last volume and the current one.

105/50. *Lemonade.*—Oil of Lemon is made by pricking the peel in an ecuelle, which is a saucer-like instrument fitted with pins and a pipe to drain off the oil; or by simply pressing the lemon forcibly with the hand, and absorbing the oil with a sponge. See our issue of August 24, 1889, page 269.

105/52. *Josephus.*—(1) Your first question is far from being explicit. Lanoline ointment is best for the skin, and should be mixed with 2 drachms of rose-water and 2 grains of salicylic acid to the ounce. (2) Maroon lake makes a good mahogany stain. Twenty grains, or more, to the pint of spirit varnish should suffice; but make a trial for yourself.

106/62. *C. R.*—Pommade Hongroise:—

	Oz.
White wax	4
White soap	2
Gum arabic, picked	2
Water	4

Dissolve the gum in the water, melt the wax over a water-bath, and add to it the soap in shavings. Stir well until the mixture is uniform, then add the gum solution, and continue to stir until nearly cold; then perfume suitably, say with lemon and neroli.

99/19. *Ceratum.*—Walnut Pomade.—Beat 4 oz. of green walnut shells, with $\frac{1}{2}$ oz. of alum, in a mortar until perfectly smooth, and digest the paste in 20 oz. of benzoated lard on a water-bath until clear (that is until all the moisture has been driven off). Then strain and perfume with otto of rose and neroli, or any other perfume.

Information Supplied.

Bicycle-lamp Oil.—In the hope of assisting 99/34, who wants a formula for bicycle-lamp oil, I send the following, which I have found good:—

Sperm oil	1 pint
Camphor	2 oz.
Good brand of paraffin	2 "

Dissolve the camphor in the sperm oil (colza is cheaper and not much inferior), and add the paraffin.

A more brilliant light is given by the following mixture:—

Sperm oil	5 oz. fluid
Camphor	4 oz.
Cocoonut oil	4 "

This, of course, forms a semi-solid compound, which readily becomes liquid, the heat of the burner sufficing to keep the contents of the reservoir liquid. This smokes somewhat, and in my lamp, swinging on the hub, it blackens the mirror, so that I discarded it. It might probably do good service in a fixed lamp, e.g., the lamp on a safety bicycle bracket, or for magic-lantern purposes. HOTSPUR. (112/2.)

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

103/67. Formula for a cycle black enamel which will not peel off after heating with a spirit-lamp.

110/53. Soluble Salicylate of Quinine.—May the natural quin. salicylate be dissolved so as to be miscible with water in all proportions?

102/11. Chineolis red; what is it?

107/62. A Norwich chemist has dispensed "solution of soft soap, as recommended by Dr. — as a hair-wash." What is meant?

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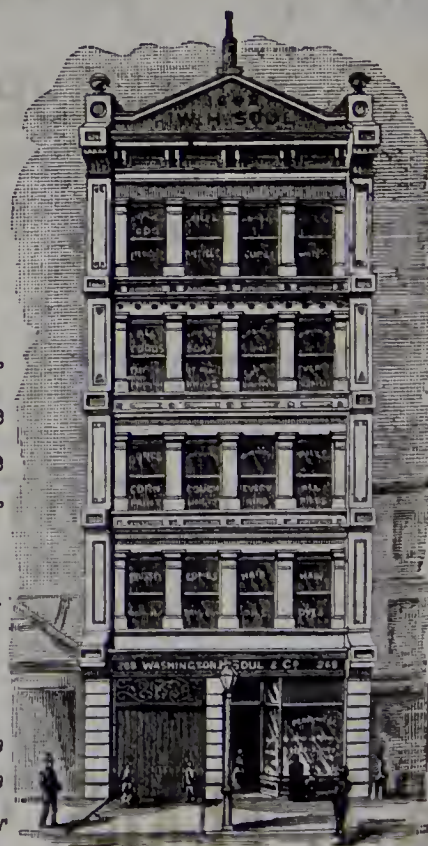
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See *BRITISH MEDICAL JOURNAL*, Nov. 30, 1889.

The deductions from these experiments indicate that artificial salicylic acid and its salt of sodium are dangerous and, in large doses, fatal to animals, while salicin, natural salicylic acid, and its salts of sodium are not. That artificial salicylic acid contains an impurity or impurities, and until this or these can be extracted by the aid of chemistry the internal administration of it or its salts of sodium should be discountenanced. Large and repeated doses of the sodium salt are necessary in the treatment of acute rheumatism, and hence we may account for the restlessness, the confusion, and the delirium sometimes attendant on its use, which have been testified by clinical experience. It is more than probable, too, that the retarded convalescence occurring in some cases of acute rheumatism after the salicylate treatment is due to the great and protracted prostration which the impurity or impurities give rise to. It is to be remembered in connection with these symptoms that prescriptions of the salicylate of sodium are invariably made up, unless otherwise indicated, from the artificial and not the natural salt.

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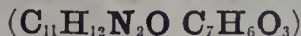
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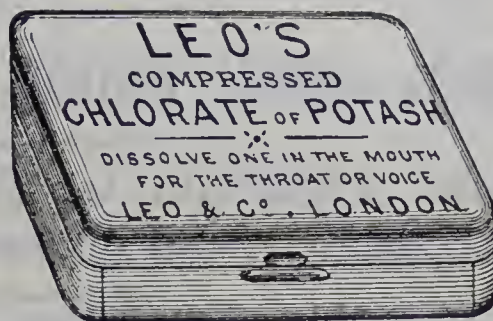
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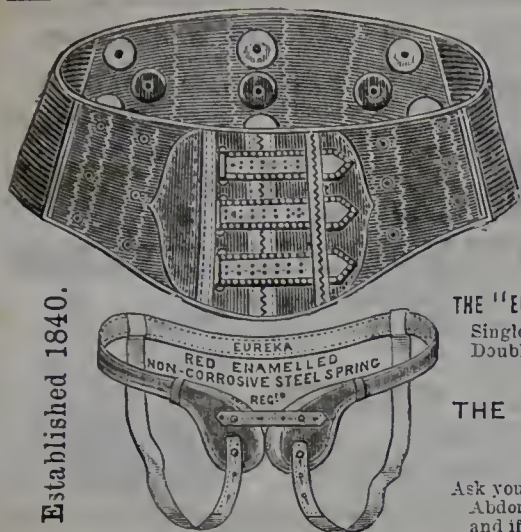
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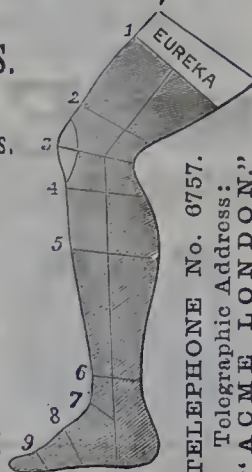
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DISEASES OF THE LUNGS, WINDPIPE, NOSE, AND THROAT,

Claims to be a Specific for all Congestive and Inflammatory conditions of the Respiratory Apparatus, and will be found efficacious in

COUGHS AND COLDS, ASTHMA, BRONCHITIS,

Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Croup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

PREPARED ONLY BY THE INVENTOR.

None Genuine except such as bears the above Trade Mark "SPIRONE" and the Signature of the Inventor upon the Bottles on the Label over the Cork, and on the Wrapper,

JOHN FRANCIS CHURCHILL, M.D. (Paris),

The Discoverer of the Specific Cure for Consumption, and of the Medicinal Properties of the Hypophosphites.

Price 4s. 6d. and 11s. per Bottle.

SET OF APPARATUS FOR ADMINISTRATION, 15/. PAMPHLETS AND SHOWCARDS FREE ON APPLICATION.

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MANUFACTORY.

"Eclipse" Glass Works,
Lea Bridge, Clapton, London, E.

Prize Medal, Adelaide Exhibition, 1887.
Award of Merit, Melbourne, 1888.

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LONDON, E.

E. A. HEARN & CO.

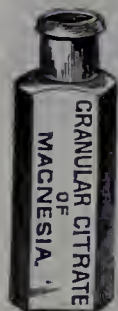
WHOLESALE AND EXPORT GLASS BOTTLE MANUFACTURERS.

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FEEDING BOTTLES IN ALL SHAPES,
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SPECIALITY.—First-class Quality at Reasonable Prices.



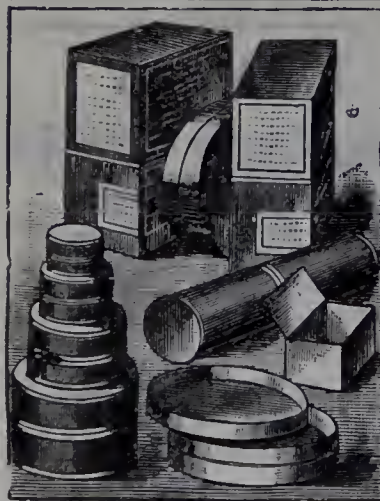
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OF THE
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DISPENSING, PICKLE, SAUCE, OIL,
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ROUND, OVAL, AND SQUARE SHAPED BOXES

FOR POSTAL AND GENERAL PURPOSES.

ALSO PATENT BARREL PACKAGES WITH METAL ENDS, FOR DRY GOODS,

AND

Makers of best class of Violet Powder Boxes, and high-class goods of every description for Perfumery, &c.

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STEAM WORKS, 2 PRINTER'S BUILDINGS.

[2]

PURE TARTAR EMETIC.

PURE OXIDE OF ANTIMONY.

Showing 98 per cent. of anhydrous Sb_2O_3 .

This product is obtained BY A NEW PROCESS, and is offered at VERY ADVANTAGEOUS PRICES.

POULENC FRÈRES,

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Grand Prize, Universal Exhibition, Paris, 1889.

DISPENSING BOTTLES & PHIALS

The following are our present Greatly Reduced Prices for not less than 3 gross of assorted sizes:—

	Per Gross.		Per Gross.
6 & 8 oz., Plain or Graduated	8/6	1-oz. Phials	3/6
3 & 4 oz.	7/6	1-oz. "	3/9
		1½-oz. "	4/6
12-oz.	12/-	2-oz. "	5/3

Packages, 1/ each, allowed for if returned.

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"BOTTLES LONDON."



LONDON, 1862.

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PARIS, 1875.

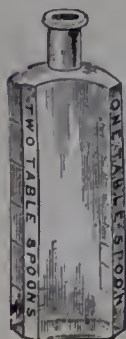


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Codd's, Bulbs, and all the best stoppered kinds ; full size and splits. Also Cork Bottles in all sizes and shapes.

VAN BOXES and CASES to contain above and many other kinds of bottles.

For full particulars see Special Illustrated Catalogue of Mineral Water Bottles, Boxes, Syphons, &c., issued each Season.



DISPENSING BOTTLES.

In Green and White Flint. All the required sizes. Flat, Oval, Round, Octagon, and Direct Square. The "K" brand, being well known, is in constant and large demand.



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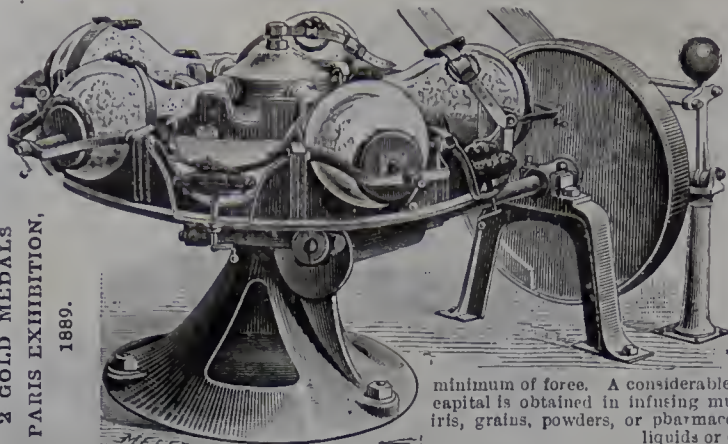
Fitted in a large variety of styles to suit all classes of buyers.

Careful attention is given to quality of Bottles and Rubber.

Increasing sales testify to the satisfaction given by these Feeders.

For further particulars see Illustrated Price List of Dispensing and other Bottles, which will be sent on application.

3 GOLD MEDALS
PARIS EXHIBITION,
1889.



BEYER FRÈRES, 16 & 18 RUE DE LORRAINE, PARIS.

NEW AGITATING MACHINE

For macerating and exhausting raw materials in infusion with alcohol, producing 150,000 movements per day in each metal receptacle, with a minimum of force. A considerable economy of time, labour, and capital is obtained in infusing musk, amber, benjamin, civitte, iris, grains, powders, or pharmaceutical products treated with liquids or ether.



These machines are made for 10 or 15 bottles, each containing about 15 litres, as required

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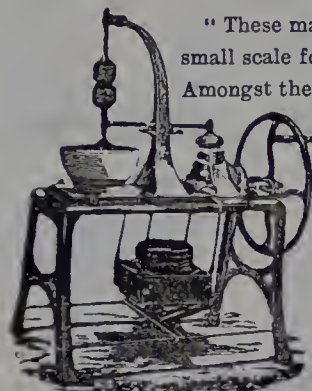
GOODALL'S PATENT GRINDING & LEVIGATING MACHINES.

"These machines have for many years proved most serviceable on a large and small scale for Grinding, Levigating, and Mixing Powders, Pill Masses, Paints, &c."

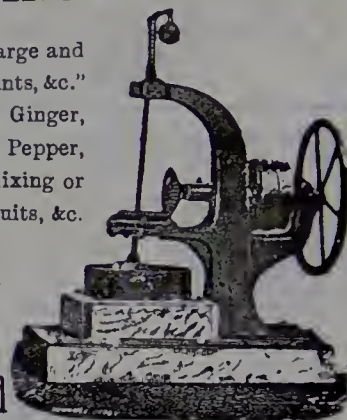
Amongst the articles which are readily ground by it may be mentioned Ginger, Seeds, Salts of all kinds, Cream of Tartar, Sugar, Cocoa, Pepper, Spice, Jalap, Rhubarb, Gums, Aloes, Barks, &c.; and for mixing or kneading Lozenges, Pill Masses, Glaziers' Putty, Bread, Biscuits, &c.

ILLUSTRATED PRICE LIST, with full particulars, sent free

Prices from £8 10s. to £60.



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Reduces lumpy powders, sifts and mixes faster, and makes a more perfect blend than any Machine in the Market.

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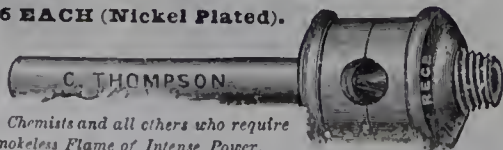
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FOR HAND OR POWER. Capacities, from 15 to 300 lbs. at one mixing.

CHAS. THOMPSON'S ATMOSPHERIC GAS JET. PRICE 1/6 EACH (Nickel Plated).

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For the use of Chemists and all others who require a Small Smokeless Flame of Intense Power.

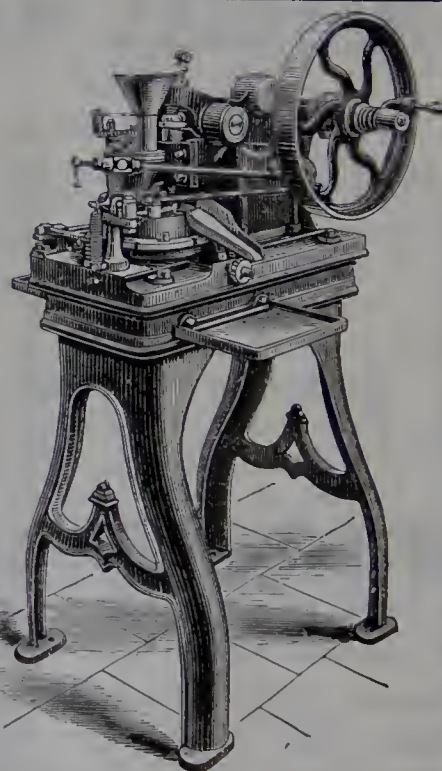
EXCLUDE AIR.—An ordinary ILLUMINATING FLAME is obtained. ADMIT AIR.—For Sealing Wax purposes this BURNING FLAME is most useful; the impression produced from a seal is a far better colour than it is possible to produce with an ordinary gas-jet.

ADMIT FULL QUANTITY OF AIR.—For Soldering purposes this powerful BLOWPIPE FLAME is invaluable to Jewellers, Dentists, and others.

Small Nickel-Plated Taps to fit the above Jets, 1/- each. Registered Gas Bracket, as shown on page 133 in the summer number, 7/6 each complete, Nickel-plated. Write for descriptive circular.

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CHAS. THOMPSON, Pharm. Chemist, Sparkbrook, Birmingham. On receipt of Postal Order No. 111.



Sole Licensees for Manufacture and Sale of McFerran's Improved Automatic Machinery for Making
COMPRESSED TABLETS
Of various shapes and sizes, from 1 gr. upwards.
Experts sent to fix and start Machines. Write for particulars and prices.
MOULDS FOR CAPSULE MAKING. Machines Manufactured to Contract for Inventors & Merchants.

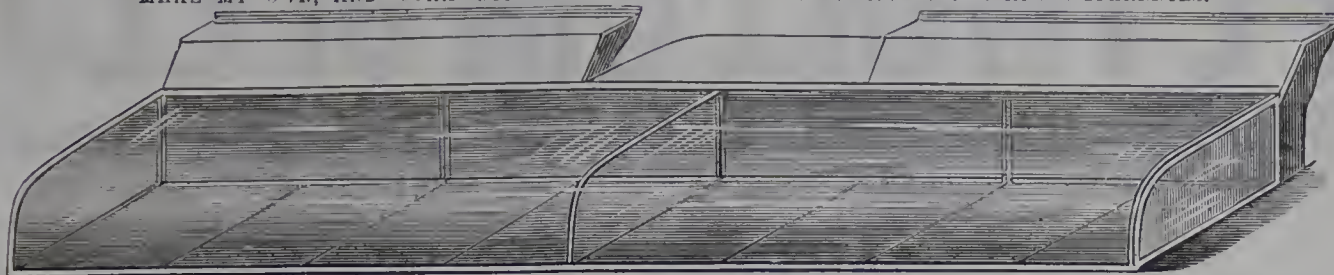
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MAKE MY OWN, AND WORK GUARANTEED. HUNDREDS OF TESTIMONIALS AND REFERENCES.



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No connection with any other house of the same name. Please address in full.

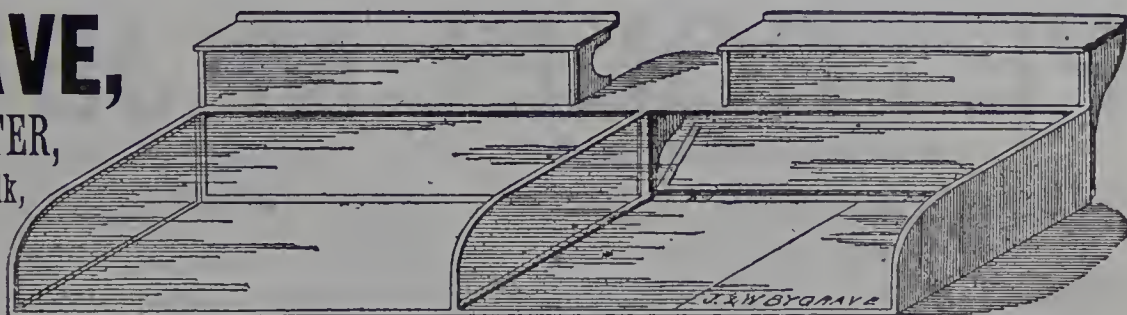
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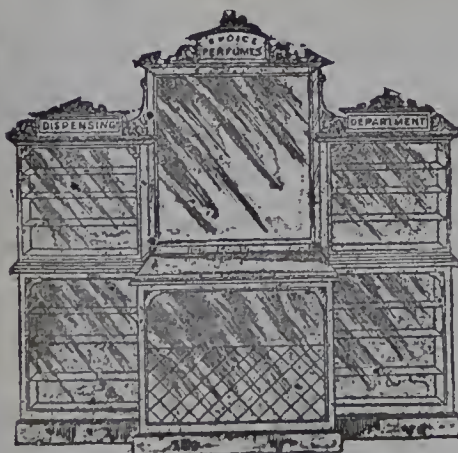


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6 feet long by 2 feet wide .. £24
If the Dispensing Screen only, £12

This handsome Dispensing Counter is manufactured in Spanish mahogany, and of the best workmanship, so that it will stand any climate. The counter has a solid mahogany top, and plate-glass case front. The centre part fitted to take sponge. A mahogany screen on top, consisting of two plate-glass cases, with shelves inside, and large plate-glass mirror in the centre, and three glass tablets with gold writing in ornamental mahogany carved work. The back of screen fitted with small shelves and a glass poison cupboard. The inside of counter fitted with strong counter drawers, label and cork drawer, open shelves, &c.



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In consequence of inferior Second-hand Goods being sold for our make, we have found it necessary to protect our reputation for best work with a Trade Mark, as above, and unless goods are so stamped we cannot be answerable.

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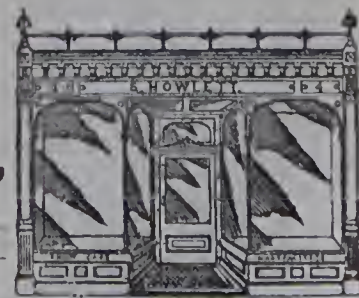
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A LARGE STOCK of New and Second-hand Fittings and Cases to be sold very CHEAP.

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WHITE, RED, and YELLOW—Best and Purest.

Consistency suitable for all Climates, and pronounced by the MEDICAL PROFESSION to be *UNSURPASSED*,
Tins of all sizes, from 1 to 10 lbs.; Iron or Wood Kegs, $\frac{1}{4}$, $\frac{1}{2}$, and 1 cwt.; Barrels about 3 cwt., &c. Samples and prices on
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PARAFFINUM MOLLE B.P. (PIONEER BRAND.)

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FOR MEDICAL AND PHARMACEUTICAL PURPOSES.

White, Yellow, Veterinary, and Waterproof. All kinds put up in 1-lb., 5-lb.,
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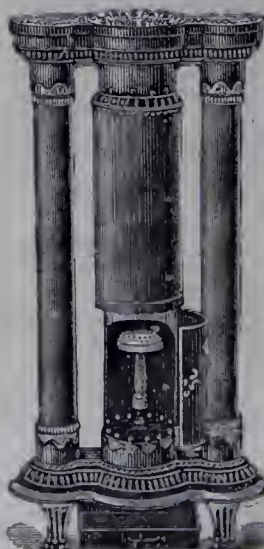
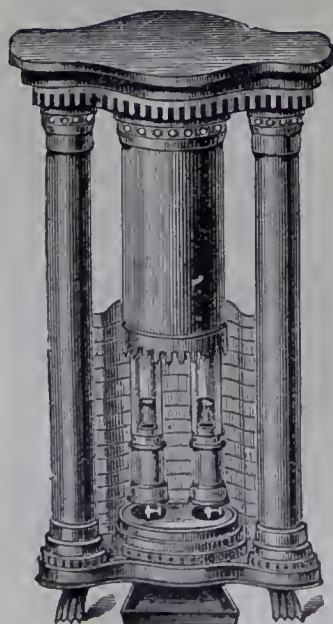
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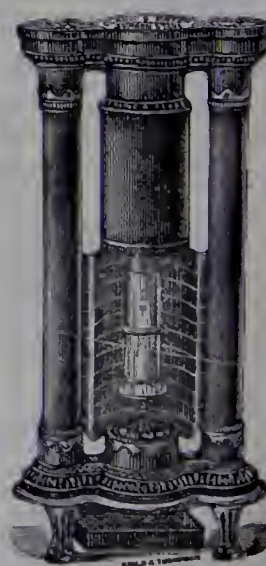
All injurious vapours are reduced to harmless liquid inside the Stove, and passed
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For Use in Hospitals, Sick
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Specially
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suffering from
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For Terms,
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We guarantee our **S.V.R.** to stand the Nitrate of Silver and the Ammonia tests, and to be entirely free from the offensive odour which usually characterises low-price spirits.

Pure Grain Spirit B.P., 56 o.p., 19/3 per gallon.
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SPECIALITY FOR PERFUMERY.

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class Perfumes.

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TREBLY DISTILLED BY OURSELVES.

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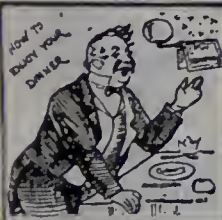
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CHEAPEST HOUSE

FOR METHYLATED SPIRIT

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64

Jars, 2-gallon, 2/6; 3-gallon, 3/; 4-gallon, 4/.
Drums, 5-gallon, 3/6; 6-gallon, 4/; 10-gallon, 6/.



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"Catch more Flies in a day, than the old-fashioned papers do in a week."

THE "FLY CEMETERY"

Free from Poison. Annual sale millions. Liberal Terms.

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Of all kinds, for Coachbuilders, Decorators, &c. OIL BOILERS, REFINERS, & MERCHANTS Export Orders receive special and prompt attention.

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COMPRESSED DIP FOR
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A NEW & MOST EFFICIENT PREPARATION

THE CHEAPEST DIP IN THE MARKET.

In blocks, each sufficient for twenty sheep. Carriage Paid and Cases Free on lots of six dozen.

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DESTRUCTION OF RATS, &c. STEINER'S VERMIN PASTE

REGISTERED.

Is used in
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Is used
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England,
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Is a Sure and Certain Destroyer of

RATS, COCKROACHES, MICE, AND BLACKBEETLES.
IT NEVER FAILS!!!

The great strength of Steiner's Paste is not impaired in hot climates.
Sold in 3d., 6d., and 1s. Glass Jars, and 2s. 6d. Tins.
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ASK YOUR CHEMIST FOR IT.

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Concentrated Non-poisonous Soluble Fluid.



1 gallon will dip 100 Sheep.

PER 5s. GALLON (drums free).

Special Terms and Discounts to the Trade.

Also Poisonous Powder Dip in packets. Paste Dip, or
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The Trade supplied at most liberal terms, without name
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WORLD-FAMED HORSE & CATTLE MEDICINES.

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FOR Colic or Gripe in Horses and Cattle.
FOR Debility and Chills in all Stock.
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FOR Fevers, Yellow, Indigestion, and Dulness.
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FOR Ill Condition, Off Appetite, Disordered System.
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Only Prepared by the Inventors, **DAY & SONS, Crewe, Cheshire, ENGLAND**

Exporters are invited to apply for terms. Liberal Discount offered.



*Under the Special Patronage of
Her Majesty the Queen,
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DOWN'S FARMERS' FRIEND

Has stood the test of upwards of 50 years, and is acknowledged to be the safest and most effectual preventive of

SMUT IN WHEAT, BARLEY, OATS, &c., the Ravages of the Slug, Grub, and Wire-worm, and the Incursions of Rooks and Vermin.

It will also promote the Germination and Growth of the Seed Corn, and increase the produce of the Crop equal to a Change of Seed. A Ninepenny Packet is sufficient for Six Bushels of Seed, which can be Dressed and Fit to Sow in a Quarter of an Hour.

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CAUTION.—Each Packet of the Farmers' Friend bears a facsimile of the Inventor's Signature.

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Pamphlets on Canine Diseases for gratuitous distribution. Show Cards and Handbills Supplied.

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THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, swellings, and relaxed tendons in Horses. For pain after calving and lambing, and for swollen udders and sore feet.

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Celebrated for inflammatory disorders, such as fevers, pleurisy, foot-and-mouth complaints, yellows, snuff, and red-water. Also for difficult calving and lambing. Admirably adapted for cleansing and checking feverish symptoms in Cows and Ewes after a bad time of parturition.

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THE GASEOUS FLUID.

Unmatched for colic or gripes and debility in Horses, for colds, chills, shivering fits, flux and diarrhoea in Cattle, Calves, and Sheep. For Ewes weakly after lambing and blown Cattle and Sheep, its effects are marvellous.

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Used as laudanum in uncontrollable spasmodic pains and violent bowel complaints. Invaluable for parturition in Mares, Cows, and Ewes.

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THE RED PASTE BALLS and RED POWDERS.

For ill-conditioned Horses and Colts; invaluable after hard hunting or driving. For coughs, colds, staring coat, itching, swollen legs and want of strength. The powder given in the feed will produce fine appetite and tone.

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These Balls are matchless for thoroughly cleansing the system of all impurities, and for assisting in the expulsion of Worms. Their purgative action soon relieves Costiveness of the Bowels, and checks all Feverish Symptoms arising from gross habit.

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The great and reliable remedy for Cough or Hoarse in Cattle, Heifers, Calves, and Sheep. Its gaseous odour destroys the worm or parasite in the windpipe, removes the hard cough, and soothes the lungs and other organs.

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A small work published by us on the general ailments of stock, their treatment and cure.

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HUMBUG IN SOAPS.

WHY do some persons use one Soap and some another? Is it because they have tried several kinds, and found one more satisfactory than the rest? If so, good. But in the majority of cases it is not because the name of the soap they use has been ringing in their ears until nothing would do except to buy some? The evil effects of a soap upon the skin from day to day may be perhaps trivial, but in the course of years they may contribute largely towards the production of a yellow, muddy, blotchy complexion. All this may escape the notice of the ordinary observer. So we discover that in the selection of soaps a little judgment is requisite, as in many other minor matters of every-day life.

PICTURES.

What possible relation, it may be asked, can there be between a picture and the character of a soap the manufacturer of which happens to buy the picture? May not the picture be the best and the soap the very poorest, and *vice versa*? True, he who displays a good picture may issue the best soap he can according to his light. *But it by no means follows because the pictures we issue are of superlative merit that our soap is likewise so.* The reputation of "Vinolia" Soap rests on an entirely different basis from this, and one far more substantial.

SIGNS.

Again, we may ask, what possible guarantee of superiority is the simple posting of the name of this or that soap on all the shutters and mile-posts from Dan to Beersheba? The answer, of course, is—None! Yet innumerable people are using soap to-day simply because they have seen the name of it on a fence. Brains have they, but they think not.

TESTIMONIALS.

Then what do the abundant testimonials from the female laity prove? They may go for much, and they may go for little, but the public cannot tell their real value. We have seen reports of people upon other soaps while they used only "Vinolia" Soap. The other month we received a communication offering to conduct negotiations (always for a consideration, of course) whereby we were to be put in possession of valuable testimonials "from the very highest people," titled folk, indeed, and stars in the realm of—we don't know what. As it was not stated what credentials in the soap line these folks had, the letter has not been answered.

ANALYSTS' REPORTS.

The public may not be quite aware of the way scientific analysts' reports are sometimes procured. Here it is: The manufacturer pays so much a year, providing the analyst finds the soap sufficiently good (of course) to warrant his giving a good report. If you pay for an independent analysis, the analyst ordinarily will not let you use that, because he insists that his name is a good advertising medium, worth so much £ s. d. If the bulk of so-called chemists' and analysts' reports which are published from time to time be examined, they will be generally found defective. No evidence that the methods of manufacture were inspected usually appears, or that the crude materials used were examined. Then, again, there is a complete absence of figures. Analyses should deal in figures if they deal in anything.

EDITORS.

Next we come to paper and journal reports. An editor may be a capital hand at writing leading articles, and yet

know no more about soaps than a Hottentot about Darwinism. In many journals where more than one soap firm advertises it sometimes takes the worthy scribe till one of his advertisers stops before he can tell which is really the best soap for delicate skins. The man who will be most lavish in sugar-plums and gold shekels in such cases will have a soap that, according to some inferior journals, will iron out skin wrinkles, and take the kinks out of a negro's hair in a jiffy.

GENERAL USAGE.

Nor, again, is general usage a certain criterion of what is the best soap. For centuries the world accepted the geocentric theory of the universe, and missed the mark.

MANUFACTURERS' CLAIMS.

Neither are the claims of manufacturers to be taken as necessarily "law and gospel," for, he it remembered, they are trying to sell their goods, and are apt to be prejudiced in favour of, and blind to the faults of, their own products.

THE SOLID ROCK.

On what rock, then, is the public to stand? We think that which is most solid is the general consensus of medical and pharmaceutical opinion. We publish a long list of reports received from medical men; we have never paid a penny for one of them, and they were all voluntary; yet these reports are not a hundredth part of all that have been sent. Those who have suffered with the old harsh soaps write to pour grateful words into our ears for the comforts of "Vinolia" Soap. On every side will be found leading chemists pushing it to the front. Say what we may, the chemists of Great Britain are an able body of men, who soon winnow the wheat from the chaff. About the only soap the respectable chemists of Great Britain care to have anything to do with is ours. Why? Simply because it abrogates the evils of the old-fashioned soaps, which without are beautiful to look at, but within are full of—well, no matter what they are full of! "Vinolia" Soap contains extra cream which cannot "turn," and which renders the soap devoid of irritant action.

IVORY SKINS.

Finally, can skins even at a great age be kept as that of a young girl by the use of this or that soap? Can soap push back the hand of Time? Are we to see no more a withered face, a hairless head? If so, we say, all hail! But we have not so learned the use of soap. We have been taught that it was good to get dirt off, and the growing years have not shown us that our teachers were wrong. Riper experience has enabled us to reduce to a minimum evils that for untold ages have been the chief drawback to toilet soaps. Still, all we can say for "Vinolia" Soap is that it is for such common uses as washing the face and hands, and that it does not take off part of the skin when it takes off the dirt.

When we consider the fortunes that have been made out of things called soaps, we are reminded of the following lines from Lowell, which may have been the unwritten *credo* of not a few:—

In short, I firmly do believe,
In Humbug generally,
For it's a thing that I perceive
To hev a solid vally.
This heth my faithful shepherd be I,
In pastures sweet heth led me;
An' thi'll keep the people green
To feel ez they hev fed me.—*The Lowell Papers.*

OF ALL CHEMISTS.

PRICES:—"VINOLIA" SOAP (Foral), 6d. per tablet; Toilet (Otto of Roses), 2s. 6d.; Medicated (Balsamic), 2s. per box of 3 tablets. SHAVING SOAP, 1s., 1s. 6d., and 2s. 6d. per stick; and flat cakes in porcelain-lined metal boxes, 2s. "VINOLIA" (a plastic emollient cream for the skin in health and disease, for Itching, Eczema, Roughness, &c.), 1s. 9d., 3s. 6d., and 6s. per box. "V" POWDER (a soothing, soluble, rose dusting-powder for the Toilet, Nursery, Skin Irritation, Tender Feet, &c.), 1s. 9d., 3s. 6d., and 6s. per box.

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